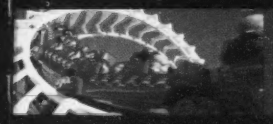

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## IT's Open Secret

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MAY 5, 2008
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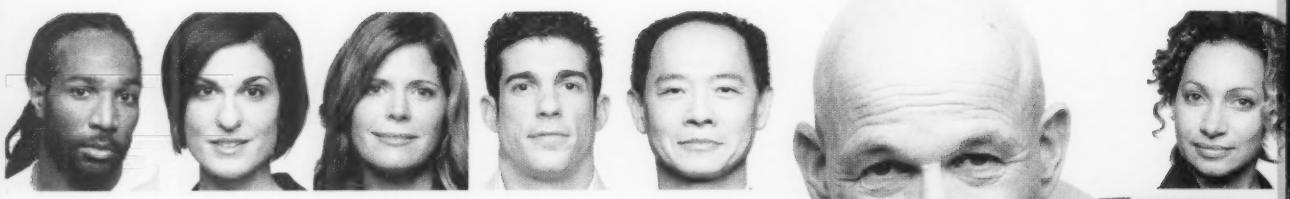
KASPERSKY lab

On A Mission.



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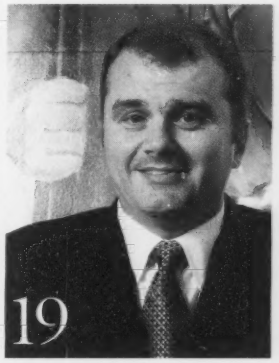


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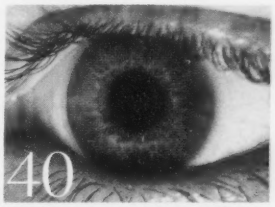


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COVER ILLUSTRATION BY JACOB THOMAS

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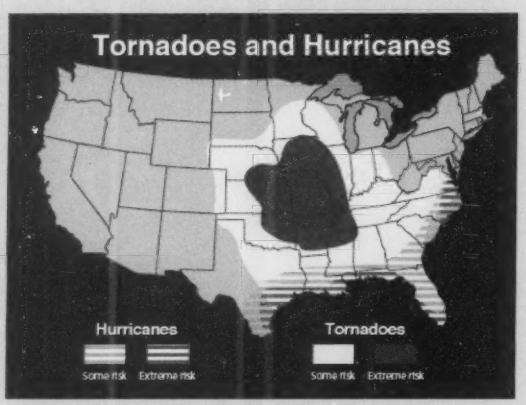


## Disaster Planning, Mix-and-Match Style

Why waste your time and money worrying about something that may never happen? Instead, figure out what type of outage is most likely to hit your region, and plan for that.

## Flash Drives vs. Hard Disk Drives

**PERFORMANCE SHOWDOWN:** Have you ever wondered if it's really worth it to plunk down the extra $1,300 for an SSD-equipped MacBook Air? Or have you been tempted to swap the current mechanical hard drive out of your portable and slide one of these high-tech bad boys inside? Our reviewer did.

## Computerworld Podcasts

**Don't have time to read Don Tennant's editor's note? Let him do it for you!**
**Check out the weekly editorial podcast.**

# Blog Spotlight

## Help for Seasick Gamers?

From Grand Theft Auto to Mario Kart, many games can't be appreciated because of the nausea they induce in some gamers. Val Potter blogs on her experience and shares what worked for her.

## Vista Fails the Grandpa Test

Preston Gralla and his 18-year-old son could barely set up a new Vista machine for an 80-year-old. If two techies struggle to get Vista working, Microsoft is in trouble.

## The Darker Side of Webmail

Although Web-based e-mail is free, convenient and efficient, it can also expose users to privacy and security dangers that they didn't sign up for.

## Dispatch From the War Over Cell Phones

**OPINION:** Columnist Mike Elgan has a theory about why people get irritated with cell phone calls in certain situations but not in others. Plus, his new rules of cell phone etiquette.

## IT Vet Gordon Bell Talks About The Most Influential Computers

**Q&A:** A principal researcher at Microsoft, Gordon Bell has been working in the IT industry for nearly 50 years. The project most intriguing him now involves finding ways for people to capture memories of their lifetimes on computers.

## It's Time for a Convergence Standard to Emerge

**OPINION:** Convergence between mobile and fixed technologies will be important to future IT strategies. First, though, a standard must emerge, says columnist Craig Mathias.

# SHARK BAIT

## IRS Is Missing the (Decimal) Point Completely

**More than just a piece of punctuation, the period proved vital when one fish's income tax report of $600 suddenly became $60,000.**

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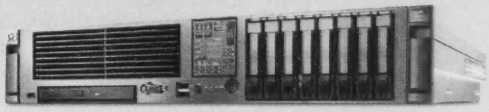

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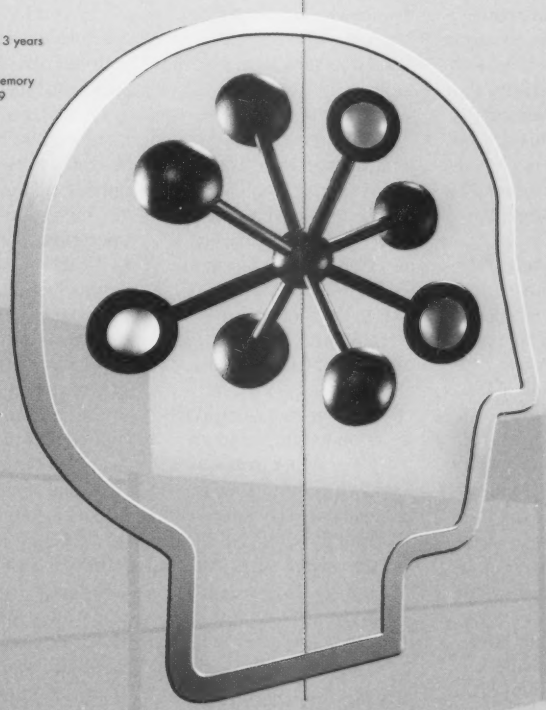

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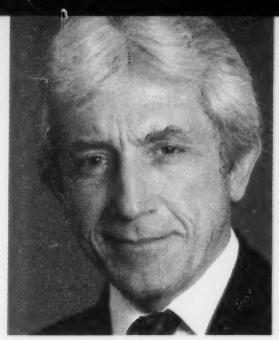
■ EDITOR'S NOTE

Don Tennant

# Campus Whispers



THIS IS coming to you from St. Louis, where I participated in the inaugural Gateway to Innovation conference organized by several local IT associations. With academia well represented at the event, some of the loudest buzz at the conference surrounded the characteristics of students planning to enter the IT profession.

Meanwhile, on campuses all over the country, many of those students are engaged in an activity that no one seems inclined to talk about. On this day, as every day, students are silently stealing property by flagrantly violating copyright law.

Suppose you were a student at one of those universities, with experience in journalism both on a professional level and as a former editor in chief of the school newspaper and an intern at *Computerworld*. Now, imagine you became aware of an explosive development involving the university's peer-to-peer file-sharing network and its widespread use by students for illegal downloads of copyrighted material.

You know that the development is an important news story for the school paper and perhaps for outside media as well.

But there are at least two problems. For one, you risk becoming a pariah for writing about a topic that many of your classmates want kept out of the spotlight. For another, you're among the large swath of students who engage in illegal downloading, and the story will "out" you.

What would you do?

That's the quandary that my son Dan, a student at Worcester Polytechnic Institute, found himself in a couple of weeks ago. It didn't take him long to come to a decision. He wrote the story.

Dan's article recounted the rise and fall of a group of students called The 40 Thieves, whose initial mission was to outsmart WPI's network operations center by countering its measures to block BitTorrent downloads. The 40 Thieves were successful enough to allow a degree of arrogance to set in, and they extended their activities beyond WPI's internal network to include self-credited distribution of illegally sourced content.

**■ No university wants to be seen as a hotbed of copyright infringement, regardless of how exemplary its ultimate handling of the problem might be.**

That brazen expansion turned out to be ill-advised. With the activity now outside the university's perimeter, the network operations center moved to disable the peer-to-peer network entirely — but not before it had monitored enough to enable it to disband The 40 Thieves.

Dan reported that four of the students were summoned before the campus hearing board and charged with violating the university's code of conduct and acceptable-use policy. When two were tried before the board last month, one was suspended, and the other was put on probation. The other two will be tried early next year. Most of the rest in the group are banned from wireless and residence-hall Internet access for one year.

There's little doubt that there's concern within some quarters on the WPI campus that the development reflects negatively on the school's image. No university wants to be seen as a hotbed of copyright infringement, regardless of how exemplary its handling of the problem might be. So the idea of publicizing the case probably received few ringing endorsements on campus.

It's to WPI's credit that no one in the administration made any attempt to discourage Dan from reporting the story. At this writing, the story has been filed to the school paper, but it has yet to be published. While I assume it will appear on the paper's Web site at some point, I have posted the full story in my blog to ensure that it does see the light of day.

What's clear from all this is that universities need to be more proactive in dealing with these file-sharing networks. WPI didn't dissuade Dan from writing the story, but there should have been more of an effort to deter students from illegal downloading in the first place.

That means more than the passive act of posting an acceptable-use policy. It means a zero-tolerance policy backed by an ongoing education campaign that makes it more difficult for students to rationalize the acceptability of copyright infringement. ■

**Don Tennant** *is editorial director of* Computerworld *and* InfoWorld. *Contact him at don_tennant@computerworld.com, and visit his blog at* http://blogs.computerworld.com/tennant.

## ■ ONLINE CHATTER

**RESPONSES TO:**

### Paying Breach Bill May Not Buy Hannaford Full Data Protection

*April 28, 2008*

The Hannaford incident is troubling in itself, but even more troubling is how the company and the industry relate to the event. Let's take a step back and take a more critical view of this incident.

What exactly happened here? Does anyone know? Neither the company, the state nor Visa is disclosing information. Yet the company has awarded a multiyear contract for millions of dollars to IBM. Does that strike anyone as odd?

How is replacing all the server hardware an appropriate security countermeasure for a future attack? What is Hannaford saying here? "We had some malware on the servers, so instead of reinstalling Windows, we decided to stimulate the economy and buy a bunch of new servers?"

I don't get it.

Let's ask some simple security questions before delving into cost justifications for technical countermeasures that will cost millions.

**1.** What was the key vulnerability that the attacker exploited?

**2.** What was the attack vector? Was it from inside the company or from outside over an open application protocol like HTTP?

**3.** Was the attacker an employee, a contractor or a malicious outsider?

**4.** What was the threat, and how do the proposed countermeasures formulate an effective set of security countermeasures?

**5.** What is the value of the credit card numbers to Hannaford, and how do they quantify the dollar damage to their asset — i.e., customer credit card numbers? Is the set of proposed countermeasures cost-effective?

Any customer with assets at risk needs to perform a practical threat analysis and ask himself these five questions.

■ **Submitted by:** *Danny Lieberman*

Everyone who wants to avoid a lawsuit should follow Hannaford's lead and encrypt customers' credit card numbers. AES is stronger, but Triple DES is adequate.

The credit card number can be encrypted at the swipe, and some service bureaus provide encryption/decryption services to the payment processors. Strong authentication and key management are also important if a firm is planning to retain encrypted credit card numbers.

■ **Submitted by:** *Michael Cherry, vice chairman, Digital Technology Committee, National Association of Criminal Defense Lawyers*

**RESPONSES TO:**

### After Web Defacement, University Warns of Data Breach

*April 25, 2008*

Why in the world would a university need a student's Social Security number unless he is on the payroll?

■ **Submitted by:** *Alex*

Alex asks why a university needs a student's SSN. The answer is simply that the SSN is equivalent to a ready-made, government-supplied unique per-person identifier and was used that way for many years.

SSNs used to be "first order," but they are now generally hidden via a one-way hash, so that the unique student ID developed is based upon the SSN (or some other government ID) but is not that ID. If a criminal knows the student ID, the algorithm cannot be reversed to determine the original student-provided identifier.

Legacy records generally still contain the SSN as the student identifier, since locating and changing them may be costly. Yes, it is now bad practice, but before the criminals learned how to consume every part of their target, it wasn't.

■ **Submitted by:** *unclesmrgol*

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# News Digest

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## THE WEEK AHEAD

**MONDAY:** SAP opens its Sapphire 2008 user conference in Orlando, side by side with the annual conference of ASUG, SAP's independent user group in the Americas region.

**TUESDAY:** The 2008 JavaOne Conference begins in San Francisco. Also, Cisco plans to report its financial results.

**WEDNESDAY:** *Computerworld*, its sister publication *InfoWorld* and three chapters of the Society for Information Management hold a one-day forum for CIOs in New York.

FOTOLIA

ENTERPRISE APPLICATIONS

## SAP Curbs Spending on New Hosted ERP Apps

SAP AG last week put the brakes on the rollout of its Business ByDesign hosted ERP offering for small businesses, after reporting that first-quarter profits slid by 22% compared with profits a year earlier.

The company said it will reduce spending on the service by about $155 million, to between $116 million and $193 million this year.

Last fall, SAP co-CEO Henning Kagermann called the September unveiling of the service, code-named A1S, "the most important announcement I have made in my career."

SAP is now predicting that it will take 12 to 18 months longer than anticipated for the product line to generate $1 billion in revenue from a customer base of 10,000. The company had expected to reach that goal by 2010.

In a conference call, Kagermann said the company is holding off widespread deployment until it is sure it can deliver the product profitably.

"We have to work out how expensive it will be for SAP if we run this product in a hosted environment. We have to make sure we make enough money with the product," Kagermann said.

To do that, SAP executives need more time to optimize the end-to-end process of selling, delivering and running Business ByDesign. "We have too many manual steps in our hosting environment. We have to improve that," Kagermann added.

SAP acknowledged that few of the 1,570 small and midsize businesses that signed up as new customers in the first quarter are using ByDesign. It predicted that fewer than 1,000 customers will be using the hosted app by the end of 2008.

Meanwhile, the internal champion of ByDesign, board member Peter Zencke, has revealed plans to resign his post at the end of the year. Bill McDermott, president and CEO of SAP Americas & Asia-Pacific Japan, said Zencke's departure is not linked to SAP's decision. "I wouldn't couple those two things," he said.

McDermott noted that Zencke will be a consultant on Business ByDesign after he leaves the firm.

Ray Wang, an analyst at Forrester Research Inc., said that SAP's decision "reflects the realization that this is a hard market to scale and sell to."

The company reported profits of $377 million on revenue that was up 14% to $3.83 billion for the quarter.

This was the first quarter to include results from Business Objects, which SAP acquired in January.

*— Chris Kanaracus and Peter Sayer, IDG News Service*

SECURITY

## Corporate Data At Risk in Border Laptop Searches

**THE ASSOCIATION** of Corporate Travel Executives (ACTE) has warned its members to limit the proprietary business information stored on laptops and other devices they carry across U.S. borders.

The warning was issued after a federal appeals court ruled on April 21 that U.S. Customs and Border Protection agents can search electronic devices at border crossings without reasonable cause or suspicion.

Susan Gurley, executive director of ACTE, conceded that there may be legitimate reasons for such searches but added that there are no policies on what should be done with data after it is downloaded.

She suggested that firms review their policies to see whether such searches may violate customer privacy.

Cell phones and USB storage devices were included in the warning.

– JAIKUMAR VIJAYAN

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*Wireless WAN not available on all models.

MOBILE & WIRELESS

# IT Execs Not Sold On Wi-Fi Upgrade

CISCO SYSTEMS INC. and other networking vendors began rolling out higher-speed Wi-Fi access points and related hardware based on the 802.11n draft specification in earnest during this year's first quarter.

But at the Interop 2008 trade show in Las Vegas last week, some IT managers who are testing the new technology said they remain unsold on 802.11n because they have yet to see the promised gains in data transmission speeds. They also voiced concerns about the support for Power over Ethernet (PoE) connections in 802.11n-based products.

"Don't believe all of the hype," said Jorge Mata, CIO for the Los Angeles Community College District, which has been testing 10 of Cisco's 802.11n access points. The data throughput seen in the tests is "not anywhere near the increased speeds" that vendors are advertising, he said during a conference session on mobile technologies.

The community college district, which has nine campuses, now uses about 600 access points based on 802.11b/g technology, all from Hewlett-Packard Co.'s ProCurve unit.

Mata said that in the tests of the newer technology, he found that the district would need a dedicated network for 802.11n laptops and other devices because the presence of any 802.11b/g-equipped systems lowers transmission speeds.

### 802.11n Basics

**WHAT IT PROMISES:**

- A multiple input, multiple output capability that can transmit three streams of data and receive two at the same time.
- Channel bonding, which lets two nonoverlapping channels transmit data simultaneously.
- Payload optimization, for squeezing more data into each packet.

Alan Schostag, manager of information systems at Wessin Transport Inc. in Golden Valley, Minn., said his company has tested 802.11n but doesn't plan to adopt the technology until a final draft of the specification is approved by the Institute of Electrical and Electronics Engineers.

"We think that 802.11n is not there yet," Schostag said. "It will be a while before we go all 'n' — 802.11g is good for now."

A big issue for both Mata and Schostag is whether 802.11n access points will function fully while drawing power from PoE connections. Mata said his testing has shown that 802.11n access points are "lobotomized" when PoE is used.

He said he expects the IEEE's upcoming PoE Plus standard to improve the situation for 802.11n devices.

But the PoE issue could "come back and bite the vendors," said analyst Mark Brandenburg at Current Analysis Inc. He noted that some vendors are making confusing claims about their PoE capabilities. "It's lies, damn lies and even more lies," he said.

*— Matt Hamblen*

## Short Takes

- Sun Microsystems Inc. said it plans to cut up to 2,500 jobs – or 7% of its workforce – over the next three months. The announcement came after the firm reported a $34 million third-quarter loss on declining sales. Sun blamed a lagging U.S. economy for the results.
- Microsoft Corp. has released a beta version of technology that will allow its systems management software to manage non-Windows environments, including Linux and Unix servers along with VMware Inc.'s ESX Server virtualization software.
- SAP AG and Research In Motion Ltd. have signed a joint development pact to let users access SAP's ERP software through RIM's BlackBerry. SAP's CRM tool will run on the device in a few months.
- Intel Corp. has ramped up pre-release production of its Diamondville chip for small laptops and desktops because demand has been higher than anticipated. The chip is slated to be shipped to computer makers in June.

SOFTWARE

# Data Corruption Problems Delay XP Update's Rollout

**MICROSOFT CORP. last week delayed the rollout of Windows XP Service Pack 3 because the operating system update can corrupt or delete data in the software vendor's retail store management application.**

**Microsoft also suspended automatic distribution of Windows Vista Service Pack 1. In fact, the data problems were first identified as being caused by Vista SP1, according to an April 24 post by a Microsoft support engineer in an online forum for users of the Dynamics Retail Management System (RMS) application.**

**The post said that Vista SP1 changed the way Microsoft's SQL Server database handles records with information from multiple tables. Microsoft confirmed last week that the same issue would affect Dynamics RMS users running XP SP3.**

**The XP update was released to volume licensing customers two weeks ago, and Microsoft had planned to make it available on the Windows Update site last Tuesday. The company said it will resume automatic deliveries of Vista SP1 and add XP SP3 to Windows Update once it puts filters in place to block systems running Dynamics RMS from being offered either update.**

**– GREGG KEIZER**

### Waiting Game

**August 2004:** Microsoft ships Windows XP Service Pack 2.

**October 2006:** The planned release of XP SP3 is delayed from sometime in 2007 to the first half of this year.

**April 2008:** XP SP3 is finalized, but its delivery via Window Update is postponed.

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SECURITY

# Botnet Infiltrated, but PCs Not Cleaned Up

SECURITY researchers at 3Com Corp. said last week that they had infiltrated one of the world's biggest botnets and could have snatched control of compromised PCs back from the hackers who set it up.

But citing potential liability issues, officials at 3Com's TippingPoint Technologies Inc. division decided not to eradicate the malware on hijacked PCs within the so-called Kraken botnet.

TippingPoint researchers Pedram Amini and Cody Pierce collaborated on the infiltration of the botnet. Pierce set up a fake command-and-control server by reverse-engineering a list of domain names found in a captured sample of the bot, creating a honeypot for connections from infected PCs.

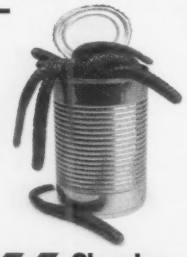
Over the next week, communications were received from about 25,000 systems. That's as much as 14% of the estimated total of Kraken-infected PCs, which ranges from 185,000 to 600,000.

Pierce also wrote code to redirect infected PCs or use the bot's update mechanism to remove the malware. He and Amini wanted to do so, but their boss disagreed, saying that taking control of PCs could leave TippingPoint liable for system crashes or other problems.

"Something needs to be done," Pierce said. "But corporate liability, everybody agrees on that. Cleaning the bots would be opening up a pretty large can of worms."

For instance, the federal Computer Fraud and Abuse Act prohibits unauthorized access to PCs. In addition, state antispyware laws have often been used to prosecute people who access systems without permission.

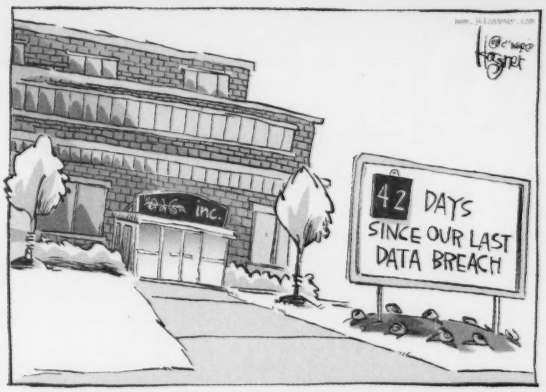
*— Gregg Keizer*



**"Cleaning the bots would be opening up a pretty large can of worms.**

**CODY PIERCE,** SECURITY RESEARCHER, TIPPINGPOINT

BETWEEN THE LINES *By John Klossner*




## BENCHMARKS LAST WEEK

**3Com Corp.** tapped board member Robert Mao to take over as CEO. Mao will be based in China as part of 3Com's increasing focus on its product operations there.

**Oracle Corp.** completed its $8.5 billion acquisition of **BEA Systems Inc.** after the European Commission gave the deal its approval.

**40 YEARS AGO:** Dartmouth College's Kiewit Computation Center set what it believed was a world record by connecting 113 active users to a General Electric Co. time-sharing system with no perceived degradation in response time.

## Global Dispatches

### Irish Data Theft Affects 31,500

**DUBLIN – The Bank of Ireland last week admitted that the unencrypted personal details of 31,500 customers – three times as many as it first disclosed – went missing with the theft of four laptops last year.**

**Early last month, the bank said that the names, addresses, medical backgrounds, life insurance details and bank account data of 10,000 customers were contained on four bank laptop computers that were stolen between June and October of 2007. The data was not encrypted.**

**In a statement, the bank said, "The data on the laptops did not include bank account passwords, PIN numbers or copies of signatures."**
**Leo King,**
*Computerworld U.K.*

### Report Hits U.K. Web Strategies

**LONDON – The British government does not know how many Web sites it operates and whether the ones it does have help residents, according to a report by the parliament's Committee of Public Accounts.**

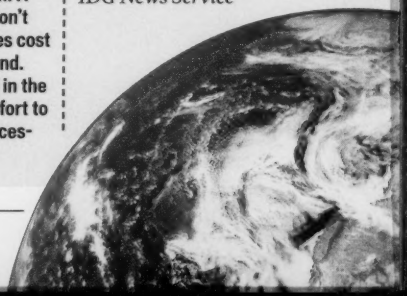
**The report estimates that government agencies run as many as 2,500 sites collectively and spend about £208 million ($410 million U.S.) per year to run them. A quarter of the agencies don't know how much their sites cost to operate, the report found.**

**The report was issued in the midst of a government effort to close 951 so-called unnecessary sites.**

**Committee Chairman Edward Leigh called the growth of public Web sites "almost uncontrolled" and said that most agencies do not measure sites' usefulness or cost-effectiveness.**
**Siobhan Chapman,**
*Computerworld U.K.*

**BRIEFLY NOTED**

**Microsoft Corp. has completed its $1.2 billion (U.S.) purchase of Oslo-based Fast Search & Transfer ASA. The maker of search technology will become a Microsoft subsidiary headed by John Markus, who was its CEO prior to the acquisition.**
*Chris Kanaracus,*
*IDG News Service*



# Work with InterSystems.

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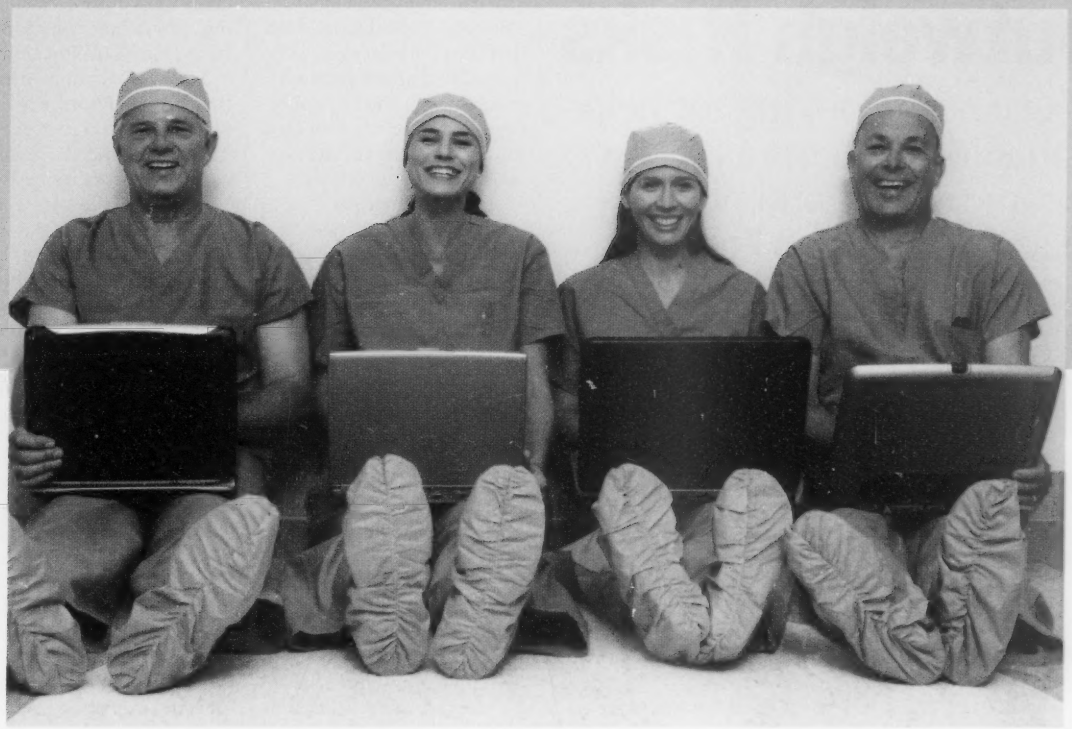

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# SaaS Benefits Starting to Outweigh Risks

## IT execs are looking for help managing systems as workers become scarce and projects linger on. By Brian Fonseca

MANAGERS ARE looking more closely at hosted business applications as the number of unfinished IT projects grows, skilled workers become increasingly scarce, and upgrade and maintenance costs skyrocket.

Many large companies had long avoided hosted services because of concerns about security, customization, integration and long-term costs.

But in recent interviews, IT managers at some enterprises said they are turning to, or at least evaluating, hosted products as a way to offload management of some non-mission-critical applications. Further, some say the subscription-based pricing model can keep IT budget costs consistent and often lower than packaged or homegrown software.

In a report released in March, Forrester Research Inc. said that the use of hosted software products in companies with more than 1,000 employees grew by 33% from 2006 to 2007. The survey of 1,017 IT professionals found that the most popular hosted services are human resources, CRM and collaboration tools.

Ben Pring, an analyst at Gartner Inc., said that despite IT managers' interest in hosted systems, many of them are "conflicted," in some cases because business units are signing contracts on their own.

"[IT managers] see this as a threat," he said. "It's loosening their control and introducing security, vulnerability and integration headaches."

Nonetheless, managers are starting to realize that at some point, IT will become responsible for hosted products, whether it oversees implementation or not.

"They know at some stage, the business people who've gone out and bought this stuff will throw it at them," Pring remarked.

Basil Blume, executive vice president and CIO of Colorado Capital Bank, said that the Castle Rock-based financial institution uses more than 30 hosted applications, which account for 60% to 70% of the financial institution's software library.

He agreed that the thought of hosted systems can be "very disconcerting" because of fears that IT could lose control of applications and data. "They're concerned about their data," Blume said. "I am as well."

Still, the benefits of using hosted software have allowed the bank's systems to keep up with its rapid growth, Blume said.

About five years after its founding in 1998, the bank turned to hosted software to quickly add several new programs for customers. At the time, "we were a $50 million bank," Blume said. "Today, we're a $700 million bank, and many of those [first hosted] solutions are still the same."

The bank's IT managers have concluded that "the ability to scale without having to reinvent that infrastructure is a huge benefit," he added.

The hosted systems that Colorado Capital used include a key Internet banking system hosted by Intuit Inc.'s Digital Insight Corp.

To internally implement that system, Blume explained, the company would have had to spend significant amounts of money to bolster firewalls, hire a chief security officer, buy new servers and backup systems, and establish off-site disaster recovery facilities.

Mark Buzby, human resource information systems director at The Pep Boys in Philadelphia, said he is "optimistic" about the auto parts supplier's plan to use a new hosted compensation system from Xactly Corp.

"Obviously, with the economy the way it is, we're looking to cut costs just like any other retailer," he said. "[But] to be honest, there is a little caution going into this."

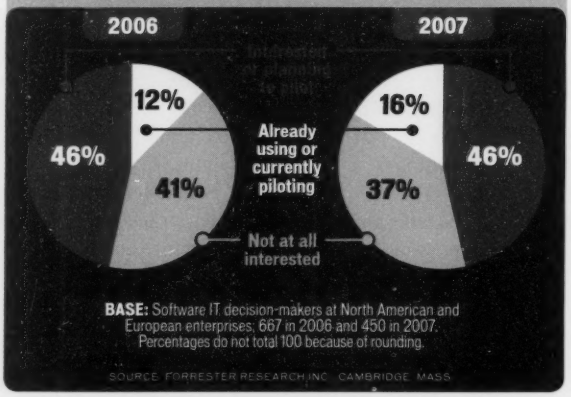
The company was set to start evaluating the service at 60 stores late last month to calculate the sales commissions of service desk workers. If that goes smoothly, Pep Boys will deploy the hosted software to 1,500 employees at its 500 remaining stores over a six-month period, Buzby said.

The company also hopes to use the software as a password-protected reporting tool for employees, managers and executives.

Buzby noted that Xactly has already successfully tweaked the application for Pep Boys in response to a change in its needs.

Xactly Chief Operating Officer Evan Ellis said that vendors of hosted software are under growing pressure from corporate customers

**How interested are you in adopting software as a service?**




**BASE:** Software IT decision-makers at North American and European enterprises, 667 in 2006 and 450 in 2007. Percentages do not total 100 because of rounding.

SOURCE: FORRESTER RESEARCH INC., CAMBRIDGE, MASS.

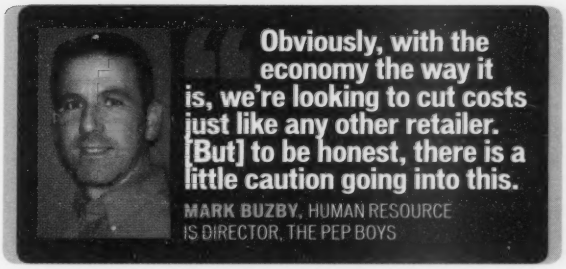
to provide applications that can be easily tweaked to fit IT and business needs.

IT demands are also forcing vendors to link internal legacy software and hosted systems and to offer corporate users improved service-level agreements.

Pricing scheme and SLA policies can vary among vendors, and IT managers should take a close look at each, analysts said.

"If you're looking at years three, four and five, is there a crossover at some point?" asked Forrester analyst Liz Herbert. "Some corporations believe that in the long run, software as a service is more expensive."

And Gartner estimates that more than 60% of hosted software users today lack an SLA, despite the potential for service delivery interruptions, performance problems or changes in ownership.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Tom Lockwood, director of IS and logistics at Seattle-based Car Toys Inc., said an outage at PivotLink Corp., the company's provider of hosted business intelligence software, convinced him of the value of a strong SLA.

Lockwood said the outage came when PivotLink opted to move Car Toys' data to new hardware late on a Saturday night without advance warning. PivotLink thought that installing new hardware on the last day of the month would cause little disruption, he said.

But it did disrupt the creation of Car Toys' monthly reports. "That happened once, and never again," Lockwood said.

After the incident, the two firms signed an SLA that requires PivotLink to notify the maker of entertainment, security and other automotive devices about any planned upgrades, maintenance or outages.

Since then, Car Toys has become a believer in SaaS, Lockwood said, and it is now evaluating a hosted payroll application from Automatic Data Processing Inc.

Gartner predicts that corporate adoption of hosted software will grow by 22.1% annually through 2011, more than double the projected growth rate for packaged applications.

But IT managers using hosted business applications warned that potential adopters should proceed carefully when selecting a vendor and conduct background checks, contact references and perform due-diligence assessments of service-delivery track records.

"When you get past that honeymoon period," Lockwood noted, "things can sour in a hurry if you don't have the right people and the right relationship in place." ■

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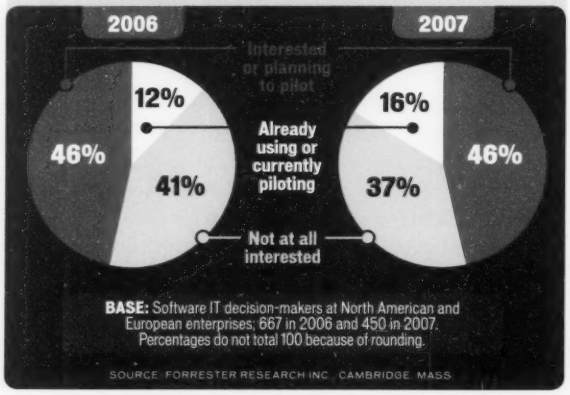


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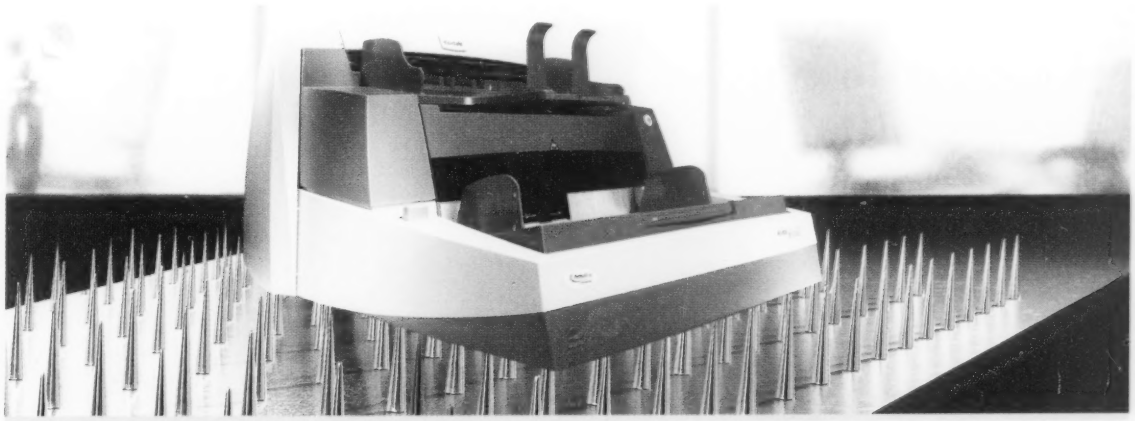

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# New Mashup Tools Look to Penetrate IT

## Vendors add links to Excel, and the ability to support SOAs.

**By Heather Havenstein, Chris Kanaracus and James Niccolai**

MASHUP TOOLS have so far been used mostly for simple applications like adding geographical information to corporate data by pulling Google Maps into common processes.

In recent weeks, though, several vendors, including IBM, have brought out updated tools that they hope will pique the interest of IT managers. Corporate-focused features include links to Excel spreadsheets — the lifeblood of many businesses — and the ability to better utilize service-oriented architectures (SOA).

Vendors say the tools enable corporate users to quickly integrate data from disparate systems to upgrade a variety of corporate IT processes, such as monitoring competitors' prices and automating manual processes.

Several of the mashup tools were introduced at the O'Reilly Web 2.0 Expo in San Francisco last month.

JackBe Corp. and Kapow Technologies Inc. both added support for Excel to existing tools, while Serena Software Inc. launched its online Mashup Exchange, where users can quickly find, buy and sell prepackaged mashups and Web services.

The new Presto 2.0 release from Chevy Chase, Md.-based JackBe allows users to let Excel directly consume mashups. A plug-in is connected to the spreadsheet so that whenever data is changed, the Presto server updates the data.

Campbell, Calif.-based Kapow unveiled an on-demand enterprise mashup service that allows companies to incorporate data from various Web sites and services directly into Excel.

IBM's entry into the mashup business on April 8 included two offerings: one to help nontechnical business users quickly build new applications by melding data from multiple sources, and another that's positioned as a mashup development environment for technical users.

The emerging technology has already attracted some large users, such as the Defense Intelligence Agency (DIA), the lead intelligence operation of the U.S. Department of Defense.

Bob Gourley, chief technology officer at the DIA until six months ago, when he joined consulting firm Crucial Point LLC, said the agency uses JackBe Presto to gather data from different internal systems and geographically display it to analysts. The tool has helped the agency slash the development time normally needed to link such data sources.

Gourley noted that the DIA is also looking to take advantage of the tool's gradual increase in support for SOA. Mashup tools are starting to provide what he called "the last mile of the SOA" — or the ability to mash data from disparate sources.

Cleveland-based Corporate Screening Services Inc., a pre-employment screening and background investigation firm, plans to use mashup tools so that workers no longer have to manually extract data from public Web sites and subscription-based Web services for background screenings of potential employees.

The company expects to be using enterprise mashup software from Palo Alto, Calif.-based Denodo Technologies Americas by June to extract Web content and mash it into its SQL database, said Tom Drellishak, the company's CTO.

Today, he said, data feeds are not aggregated in real time, "and a lot of times it is a bulk upload, so you get more data than you need or there is a massive delay. We're basically replacing humans with a computer."

Jason Bloomberg, an analyst at ZapThink LLC, a Baltimore-based consulting firm, said that although "mashups are becoming killer use cases for SOA," IT managers need to be careful when using the technology.

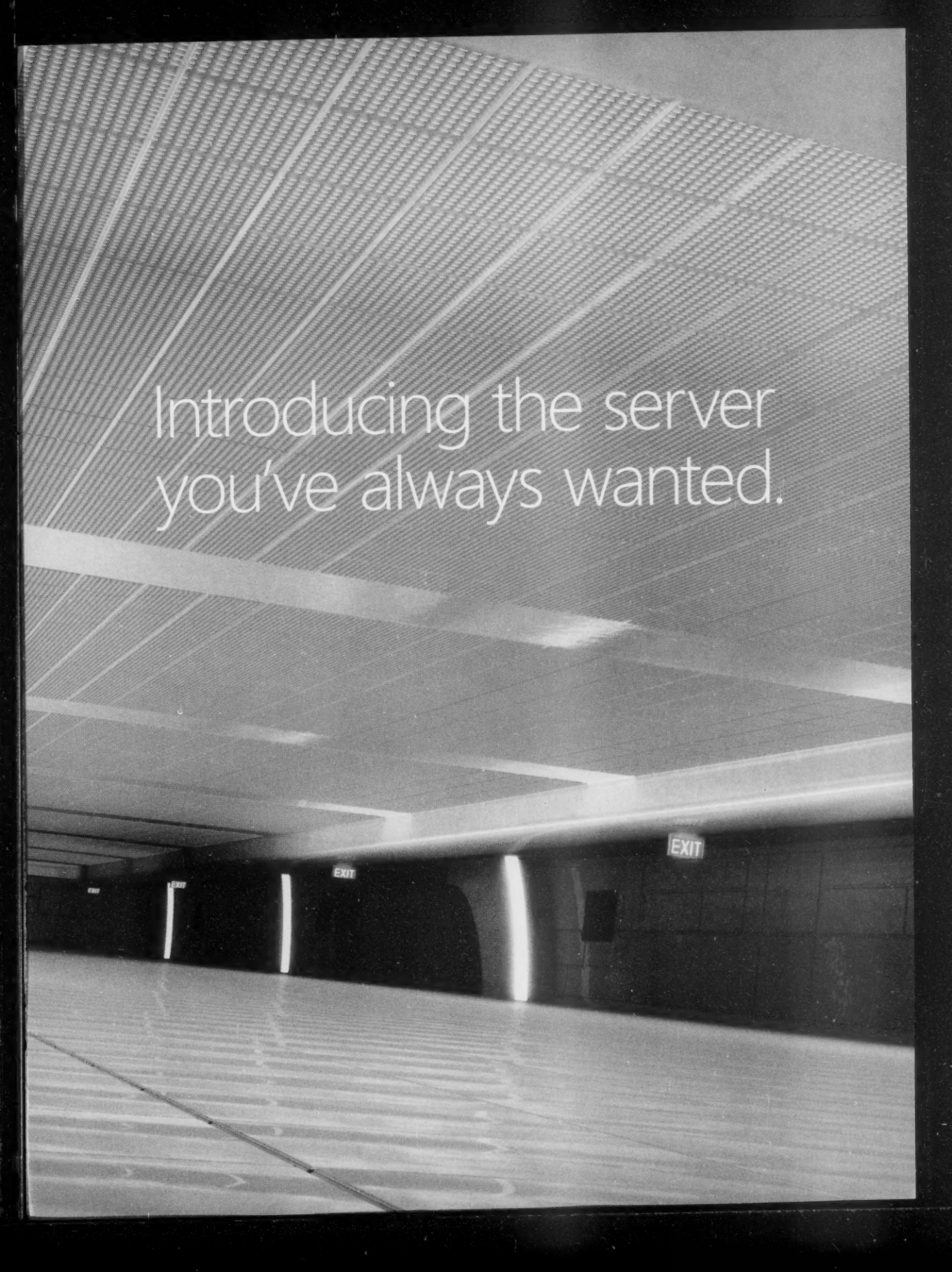
For example, they must make sure that data collected by the mashup tools meets corporate governance guidelines. "You can't just let anybody mash up anything. All [of] that has to fit into the governance framework an organization has," said Bloomberg.

Gourley added that companies should lay the groundwork for their mashup strategies even before choosing a vendor's offering. ■

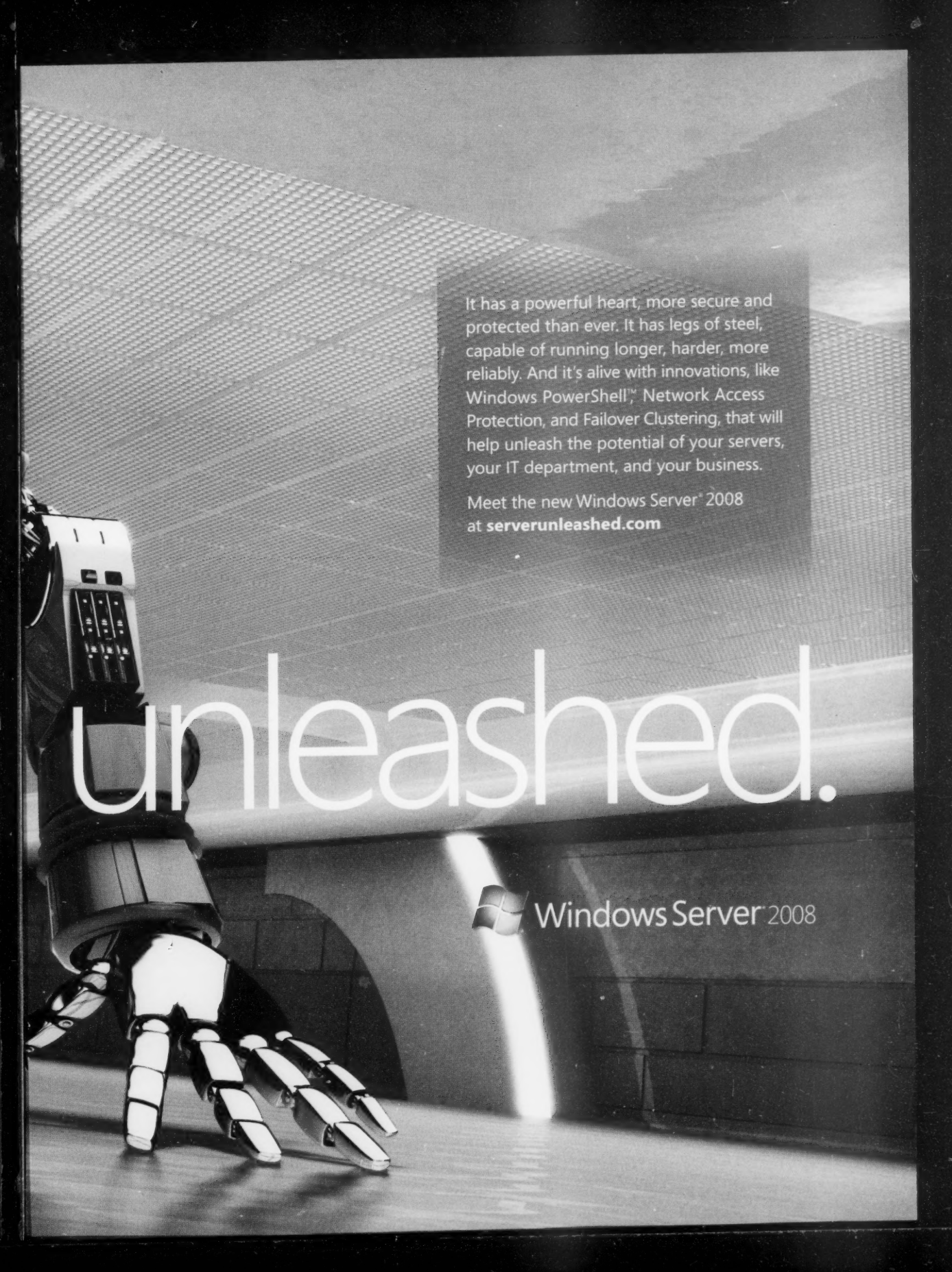
**Kanaracus** *and* **Niccolai** *write for the IDG News Service.*

### Recently Announced Mashup Tools

| COMPANY | PRODUCT | KEY FEATURES |
|---|---|---|
| [illegible] | **Presto 2.0** | Includes links to Excel, HP SOA Systinet, Adobe Flash/Flex, Java and multiple portal products. |
| [illegible] | **Kapow OnDemand** | Hosted service includes Robot Designer to construct custom Web-harvesting feeds, a link to Excel and a visual scripting environment. |
| [illegible] | **WebSphere sMash** | Supports dynamic scripting languages and widget-development tools. |
| [illegible] | **Mashup Center** | Allows business users to drag and drop components from local, enterprise and Web sources to create new apps. |


Introducing the server
you've always wanted.
EXIT
EXIT
EXIT

Microsoft
IT 24-7
Meet Windows Server 2008.
The server


It has a powerful heart, more secure and protected than ever. It has legs of steel, capable of running longer, harder, more reliably. And it's alive with innovations, like Windows PowerShell™, Network Access Protection, and Failover Clustering, that will help unleash the potential of your servers, your IT department, and your business.
Meet the new Windows Server® 2008 at serverunleashed.com
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Windows Server® 2008

# On the Mark

**HOT TRENDS ■ NEW PRODUCT NEWS ■ INDUSTRY BUZZ BY MARK HALL**

MATTHEW FAULKNER

## Microsoft Pits S+S vs. SaaS

REDMOND, WASH.

KEVIN TURNER, Microsoft's chief operating officer, complains about the hype around software as a service (SaaS), likening it to other trends that target IT but fizzle. "We've seen that movie before," he grumbles.

But that's SaaS. S+S is a different story. During a day-long briefing at Microsoft headquarters here on "software + services" (the local parlance for SaaS), Tim O'Brien, senior director of platform strategy, acknowledged that "this business is huge." And even Turner says, "We're going to lead in this area."

So, is Microsoft just trying to exchange an established acronym for a new one? No, say the execs; it wants to radically alter the way IT acquires, deploys and manages software.

**$19.3B**
**Gartner's forecast for the SaaS market in 2011.**

Naturally, Microsoft expects you to license software and run it on premises until the end of time (with regular upgrades, of course). But the company also wants you to subscribe to applications, even ones you already license, to meet staffing and deployment needs. O'Brien says you'll be able to subscribe directly through Microsoft or maybe one of its many partners. Partners might host the applications themselves, or maybe Microsoft will do the hosting while the partner holds your hand.

This mish-mash could cause problems if the on-premises and subscription versions aren't identical. The S+S approach also has to be managed efficiently, with no finger-pointing. The first time Microsoft or a partner tries to shrug off responsibility for a problem between on-premises and service software, S+S crashes and burns.

Whether Microsoft will become a dominant player in this market remains to be seen. Certainly, by choosing Exchange as a leading candidate for S+S, Microsoft is playing to its strengths. And O'Brien points to the company's multibillion-dollar investment in sprawling data centers around the globe as proof of Microsoft's commitment. Few companies are capable of competing at that level, he says.

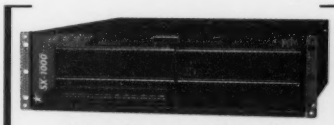
One company that can compete at that level, Google, has been cranking out data centers at least as fast as Microsoft. O'Brien acknowledges Google's high-profile position in the SaaS market. But he also notes something else: "Google is quietly pushing software down to the client."

Perhaps Google, like Microsoft, doesn't see a SaaS future for IT, but an S+S one.

## The Colors of Ethernet

The bright history of Ethernet gets even more colorful this week when Matisse Networks Inc. in Mountain View, Calif., unveils its vMetro PX and SX optical network switches as part of its EtherBurst product line. Timon Sloane, vice president of marketing, says the new systems turn standard Ethernet Layer 2 packets into bursts of light. The PX units act like a virtual backplane for up to a 200-kilometer ring network where SX units are distributed. Each SX switch adds 20Gbit/sec. bandwidth to the network, and up to 32 SXs can be supported, for an aggregate Ethernet bandwidth of 640Gbit/sec.

As the data-enriched light flies around the ring, SX units detect the color assigned to them from the spectrum. Sloane says having SXs ignore colors other than their own helps the network achieve a high level of performance. The system comes with its own management console, mQoS, which can report to other management frameworks, like Tivoli and OpenView. Sloane claims that the EtherBurst products are about one-third the cost of current optical networks for corporate metropolitan or campus networks. Available now, a PX unit starts at $60,000, and an SX at $120,000. ■



**Matisse Networks' vMetro SX sends and controls Ethernet packets at light speed.**

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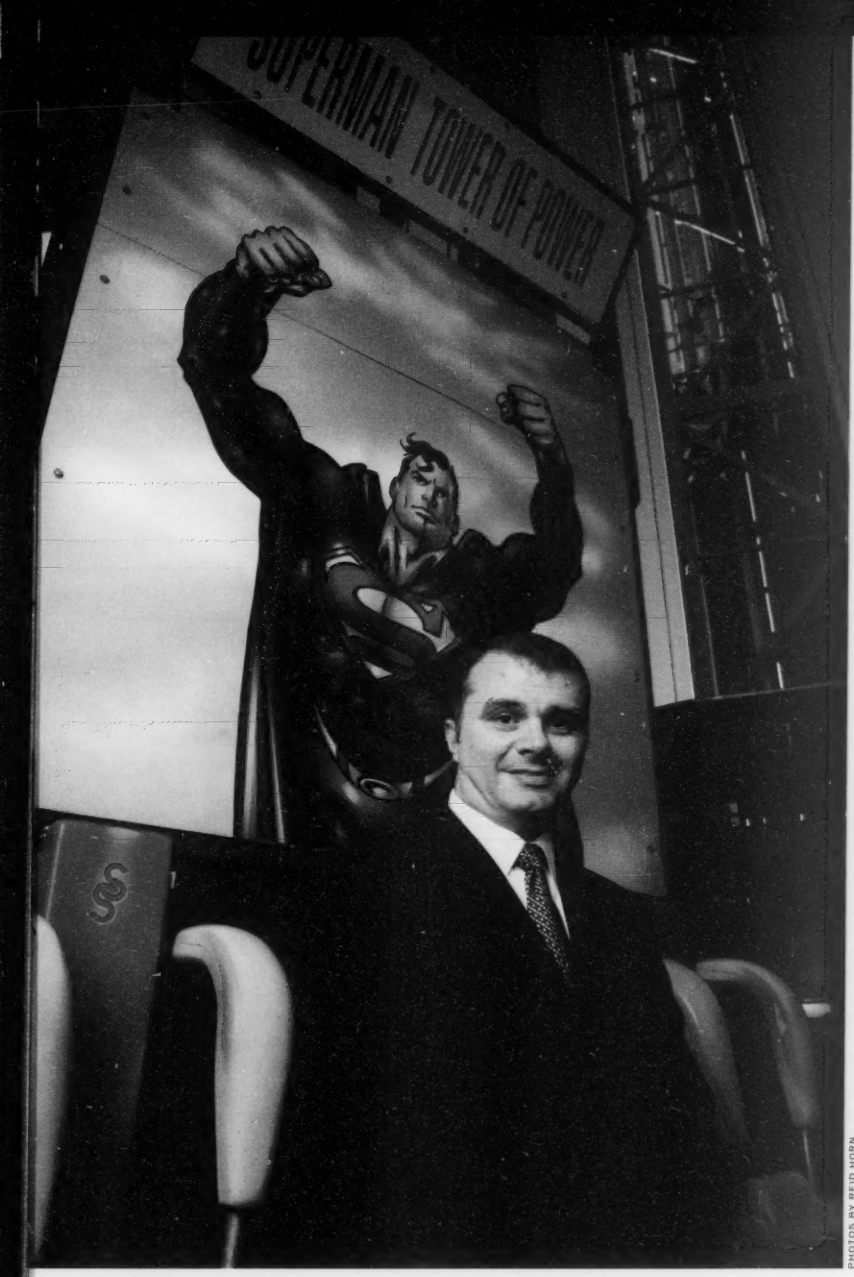



PHOTOS BY REID HORN

## Dossier

**Name:** Michael Israel

**Title:** CIO

**Organization:** Six Flags Inc.

**Location:** New York

**Favorite technology:** NetApp filers. "The software and functionality make our lives so much easier."

**Favorite amusement park ride:** "El Toro roller coaster at Six Flags Great Adventure. People-watching is also hilarious."

**Philosophy in a nutshell:** "If you are not the lead dog, the view never changes!"

**Favorite vices:** New York-style pizza and Starbucks' Shaken Iced Tea Lemonade

**Ask him to do anything but:** "Travel through Chicago's O'Hare [airport]."

**Last book read:** *Luckiest Man: The Life and Death of Lou Gehrig*, by Jonathan Eig

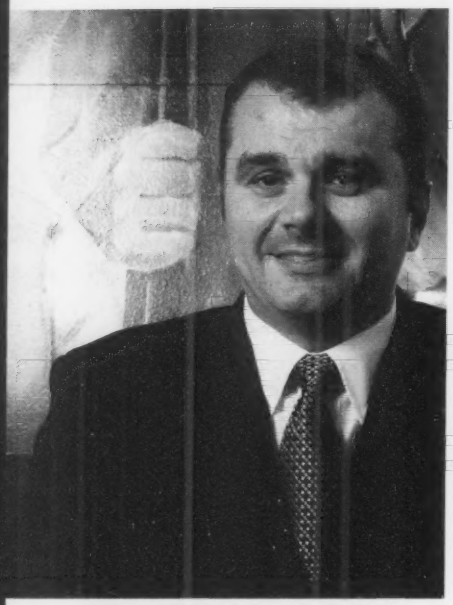
■ THE GRILL

# Michael Israel

## The **Six Flags CIO** talks about **running a seasonal business** that literally moves, **keeping lines short** and paying **the roller coaster's electric bill.**

*With 20 parks and nearly $1 billion in sales, Six Flags is the second-largest amusement park operator in the world. Since coming to Six Flags as part of a management reorganization two years ago, CIO Michael Israel has overseen a bottom-up rebuilding of the IT architecture in the parks and in the company's data center, which moved from New York to Dallas. Israel describes the amusement park business as a shopping mall with rides. "Spend per attendee is everything," he says.*

**How is the role of amusement park CIO the same as – and different from – any other CIO position?** The IT operations at Six Flags are a bit different in that there's a lot more operations involved here. We don't have a lot of that knowledge at the park level [because] we are a seasonal business. We are thin-staffed during the off-season, and there are times where the business is stretched in terms of people and operations knowledge. There are times when I'll be sitting in a park looking at how things are being done so I can get



**"We go from 3,000 employees in January to 33,000 by the end of May.**

a better understanding of how we can reinvent that process.

**What is your biggest challenge?** We're dealing with an outdoor environment. So something as simple as [wanting] another point-of-sale terminal in this location means that you're digging up the ground, laying conduit, laying cabling — and your cost to get to that location is very high.

This environment is changing; it moves. New rides go up each year; retail stands get moved. Combine that with the fact that it is a seasonal business, and you have to take everything apart at the end of the year and put it back together on a very finite schedule.

**How has the IT infrastructure changed since you joined Six Flags?** We've completely recabled our parks and laid new fiber. Everything is standardized. The data centers have been rebuilt with new cabling [and] new core switching, and the computer systems have been re-architected. About 70% of the point-of-sale terminals have been migrated to HP, and we're working on the balance. We have about 3,200 POS systems and about 3,000 PCs in the network, and about 400 servers. We have Windows/SQL databases.

**Is there any interaction between the IT systems and the ride systems?** No. Each ride is completely independent.

**How did you split up IT operations between the parks and the data center?** Certain applications are at the park level, like our POS applications. Our core applications are in our data center, but necessary park applications are localized, because if we lose our wide-area network, the parks still need to be able to operate.

The park data centers are completely redundant internally, from our NetApp filers to our server farms. The farms are clustered, the servers use iSCSI boot, and there's dual power and dual network interface cards to everything.

**How do you handle backups?** All servers boot up off NetApp boxes, and the data is snapped back to our central location, and all backups are done in our central data center. Before, we did local backups at each park, and those were stored at Iron Mountain. We eliminated the Iron Mountain contracts locally, plus I have a set of data at the park, I have a second disaster recovery set at the data center, and I have a third set that goes out on tape to Iron Mountain.

**Have IT initiatives helped produce revenue?** Yes. We have two inventory systems we've rolled out over the past month: one for retail and one for food and beverage. Those allow us to increase our revenue potential. If a food stand is running low, we know at midday instead of at the end of the day.

**How many employees do you have to support?** We go from 3,000 employees in January to 33,000 by the end of May, and [seasonal positions] turn over at least two times during the season. We have high school [students], college kids, foreign nationals and senior citizens that we bring in to work. There's a tremendous amount of training that we have to continuously work on.

**How do you deal with that?** [In March] we rolled out our first computer-based training system, which is hosted externally. It's a modularized system with different modules for basic point-of-sale operation, food operation, front gate and retail, and it takes them through the basic operations for each of those scenarios. We also keep a database of who has passed what training, so if this person is trained on food and retail, we can use them in both locations.

**You're considering biometric technology for your season pass. How will that work?** We're looking at a new ticketing system which, instead of taking a picture to identify the season-pass holder, will do a biometric scan. It doesn't take your fingerprint, but creates a numeric [value] out of certain spots on your finger.

**What are the benefits?** It eliminates the need to have your picture taken at the season-pass office, saving time. It allows access to the park a lot quicker. It also reduces fraud, [where] people give their passes to someone else to use. Even though passes have pictures on them, on a busy day, are our gate attendants checking every single picture? They tell us they are, but this would eliminate a potential oversight.

**What are the privacy implications? Will the public accept that?** Out in the park, I've talked to folks in our season-pass lines waiting for two hours to get their pass processed. I asked people myself: If we did this instead, would you have an issue with it? So far, I haven't run into anyone — when I explain it correctly — who has had an issue.

**What's a little-known fact about running an amusement park business?** The electricity cost for a large roller coaster can come to $600,000 per year, [and] overhauls each season can run into the millions.

— *Interview by* **Robert L. Mitchell**

■ OPINION

Virginia Robbins

# Three Rules for Entry-Level Hiring

WHAT COULD be easier than filling an entry-level job opening? You just match the skills you need, narrow the candidates down to those you click with in the interview and then go with a youngster — someone who might stick around for years. After all, you have real work to do.

Easy, yes, but wrong on just about every count. If that's been your approach to filling entry-level positions, you might want to re-examine your assumptions. Here are three hiring guidelines I always keep in mind.

**Hire for desire.** We've all had to compromise on skills. Back when the job market was tight and managers couldn't find candidates with the perfect skills, we looked for applicants who could learn the job — maybe liberal arts majors for programmer positions, or special education teachers for support desk jobs. But even if applicants are plentiful, don't immediately discount someone because his educational background isn't an exact match to the job description.

I pay special attention to cover letters. A candidate with a well-written, thoughtful acknowledgment of an obvious gap between his skills and the job posting wins in my book over a candidate who is a better match but sends a rote letter. I've found that such attention to detail in cover letters is often a sign of someone who will take extra time to review his work. And the skills we need are often easily learned; many entry-level positions require on-the-job training anyway. Sure, you end up looking at a lot more résumés, but it's worth the extra effort.

**Hire with the team.** Of course you want rapport with your new hire, but if you hire someone you like but he grates on members of your team, you risk turning your workplace into something resembling an episode of *The Office*.

Involve your team in the process, beyond asking for referrals. Have your staff join you in the interviews, while making clear that you will make the final decision. (You'll also want to brief them ahead of time so they don't ask inappropriate or illegal questions.) You'll get your staffers' input and see how they interact with candidates.

**■ You'd probably never consider hiring someone your grandfather's age.**

And because you won't be called on to carry on half the conversation, you can observe the candidate more easily. You might notice, for example, that a candidate tends to dominate other people.

Sharing the interview load pays off by reducing the potential for conflicts after the hire.

**Hire age (and experience).** Your team may be racially diverse, but how age-balanced is it? IT maintains a myth that younger is better. And as bosses, we want to be looked up to, so for some of us, it's almost inconceivable to fill entry-level positions with people as old as our grandfathers. Even worse, we figure, would be to hire someone who held a position like ours at some point earlier in his career.

But it's actually a smart move. You're hiring someone who is able to do more but chooses not to. I know of two retired IT workers who enjoy their "easy" jobs — easy in the sense that they have no supervisory responsibilities. Their managers like them because they're reliable, get along well with everybody and, most important, do good work.

More than one manager has told me that old people are risky because they are going to work for just a few more years. But most young employees change jobs every 12 to 15 months. Hire someone who's 50, 57 or 63, and he'll likely be around a lot longer than that. And get over being threatened by somebody who could do your job — they don't want it. If they did, they'd be leveraging all that life experience into your boss's job, not yours.

In a recession year, it's easy to find lots of candidates but still just as hard to find the right candidate for the job. You'll get better results if you hire the hungry, the team-focused and the mature. ■

**Virginia Robbins** *is a former CIO who is currently the chief administrative officer responsible for bank operations at the California Bank of Commerce. You can contact her at vrobbins@sbcglobal.net.*

# IT's Open Secret

**Asperger's Syndrome** has been a part of IT for as long as IT has existed. So why aren't we talking about it? **By Tracy Mayor**

"RYNO" IS A FIFTYSOMETHING ex-sysadmin who, by his own account, is "burned out and living on disability" in rural Australia.

He loved the tech parts of being a systems administrator, and he was good at them. But the interpersonal interactions that went along with the position — the hearty backslaps from users, the impromptu meetings — were unbearable for Ryno. "I can make your systems efficient and lower your downtime," he says. "I cannot make your users happy."

"Bob," a database applications programmer who's been working in high tech for 26 years, has an aptitude for math and logic. And he has what he calls his "strange memory": If he can't recall the answer to a question, he *can* recall exactly, as if in a digital image, where he first saw the answer, down to the page and paragraph and sentence.

Bob has some behavior quirks as well: He can become nonverbal when he's frustrated, and he interprets things literally — he doesn't read between the lines. "I am sure [my boss] finds it frustrating when I misinterpret his irony," he says, "but at least he knows it is not willful."

"Jeremy" excels at being able to see an engineering problem from the inside out, internalizing it almost from the point of view of the code itself. He's great at hammering out details one-on-one with other intensely focused people, often the CEOs of the companies he contracts for. To protect his anonymity, he doesn't want to mention his programming subspecialty, but suffice it to say he's a very well-known go-to guy in his industry.

What Jeremy is not good at is suffering fools in the workplace or dealing with the endless bureaucracy of the modern corporation. If someone is wrong — if an idea just plain won't work — he says so, simply stating the fact. That frankness causes all manner of upset in the office, he has discovered.

These IT professionals are all autistic. Bob and Ryno have Asperger's Syndrome (AS), sometimes referred to as Asperger's Disorder; Jeremy has high-functioning autism (HFA).

Though the terms are debated and sometimes disputed in the medical community, both refer in a gen-

ILLUSTRATION BY JACOB THOMAS

# The Asperger's Guessing Game

**IF ASPIES are everywhere in high tech, that means there's a greater-than-average chance you work with someone, or several people, who have Asperger's Syndrome. Maybe even your boss. Or your boss's boss. Maybe the keynote speaker at your last IT conference was an Aspie.**

**Professor and author Temple Grandin isn't alone in occasionally playing a bit of a parlor game, guessing which players in the IT industry have Asperger's, either undiagnosed or simply unacknowledged publicly.**

**"I read a lot of profiles of big names in the industry in the magazines, or I'll see them on TV. I know [they have] Asperger's," she says. "I'm not going to say their names, but people in high places in the tech industry, some of them clearly [have] Asperger's."**

**Incendiary? Perhaps, but it's nothing compared with the naming of names that happens on various Aspie and IT-related message boards, Web sites and blogs.**

**Some of the usual suspects from history include Isaac Newton, Emily Dickinson and Albert Einstein. From fiction and pop culture: Mr. Spock, Mr. Bean and Sherlock Holmes.**

**– TRACY MAYOR**

eral way to people who display some characteristics of autism — including unusual responses to the environment and deficits in social interaction — but not the cognitive and communicative development impairments or language delays of classic autism.

People with Asperger's, widely known as "Aspies," aren't good at reading nonverbal cues, according to the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*. They can have difficulty forming friendships with peers, prefer a strict adherence to routines and rituals, and may exhibit repetitive, stereotyped motor movements like hand or finger flapping.

Dr. Tony Attwood, a world-renowned Asperger's clinician and author in Brisbane, Australia, defines Asperger's in a more human context: "The person usually has a strong desire to seek knowledge, truth and perfection with a different set of priorities. The overriding priority may be to solve a problem rather than satisfy the social or emotional needs of others."

Problems over people? Hmm, sounds like a techie.

A paper on Asperger's from Yale University's Developmental Disabilities Clinic continues down the same path: "Idiosyncratic interests are common and may take the form of an unusual and/or highly circumscribed interest (e.g., in train schedules, snakes, the weather, deep-fry cookers or telegraph pole insulators)."

Or technology. When Ryno spoke with a receptionist to make an initial appointment for an evaluation with Attwood, she asked him, "What is your big interest?"

"She inadvertently gave me a diagnostic question I have found invaluable," Ryno recalls. "The big interest is a great start to Aspie-spotting."

Ryno's big interest is computers and communications. And he's not the only one — not by a long shot.

## THE TECH CONNECTION

Autism, though first identified and labeled in 1943, is still a poorly understood neurodevelopment disorder. Nearly every aspect of its causes, manifestations and treatments is mired in controversy, as is nearly every aspect of autism research. As hard-to-define, often-undiagnosed or underdiagnosed variants on the high end of the autism spectrum, Asperger's and HFA are even less well quantified or understood.

Diagnoses of autism, including Asperger's, have skyrocketed in the U.S. in recent years — the Centers for Disease Control and Prevention now estimates that one in 150 8-year-old children has some form of autism. It's not clear if the increase is due to better detection, a change in the diagnosis to include a wider range of behaviors, a true increase in case numbers, or some combination of those or other factors.

It's even less clear how many adults have Asperger's. Because Aspies are usually of average or above-average intelligence, they're often able to mask or accommodate their differences. The result: Many of them make it well into middle age, or live their whole lives, without being formally diagnosed.

Where statistics come up short, anecdotes take up the slack. Ask an Asperger's-aware techie if there is a connection between AS and IT, and you're likely to get "affirmative, Captain." (Yes, *Star Trek*'s Mr. Spock is often diagnosed online as having Asperger's.)

When the question is put to Ryno, he e-mails back a visual: "Aspies --> tech as fish --> water."

Bob says, "Yes, it is a stereotype, and yes, there are a higher-than-average number of Aspies in high tech."

Nobody, it seems, has more to say on the subject than Temple Grandin, a fast-talking Aspie professor of animal science at Colorado State University who's the closest thing Asperger's has to an elder stateswoman. Grandin made her mark designing livestock-handling facilities from the point of view of the animal; she now has a thriving second career as a speaker and an author of books on Asperger's. Her books include *Thinking in Pictures* and *Unwritten Rules of Social Relationships*.

"Is there a connection between Asperger's and IT? We wouldn't even have any computers if we didn't have Asperger's," she declares. "All these

> "If you meet someone from another country, people know they're from a different country, and they cut them some slack.
>
> **JEREMY,** PROGRAMMER WITH HIGH-FUNCTIONING AUTISM

labels — 'geek' and 'nerd' and 'mild Asperger's' — are all getting at the same thing. The Asperger's brain is interested in things rather than people, and people who are interested in things have given us the computer you're working on right now."

## OPPORTUNITIES AND LIMITATIONS

At Autism.com, Grandin has compiled a list of jobs and their suitability to Aspies and autistics based on their skills. Not surprisingly, tech jobs are cited often. Her list of "good jobs for visual thinkers," for example, includes computer programming, computer troubleshooting and repair, Web page design, video game design and computer animation.

Grandin's "good jobs for nonvisual thinkers," which she defines as "those who are good at math, music or facts," include computer programming, engineering, inventory control and physics.

Why do Asperger's individuals gravitate toward technology? "Adults with Asperger's have a social naiveté that prevents them from understanding how people relate. What draws them in is not social interaction, but work that allows them to feel safe, to feel in control," explains Steve Becker, a developmental disabilities therapist at Becker & Associates, a private practice whose services include ongoing small-group sessions for adults with AS.

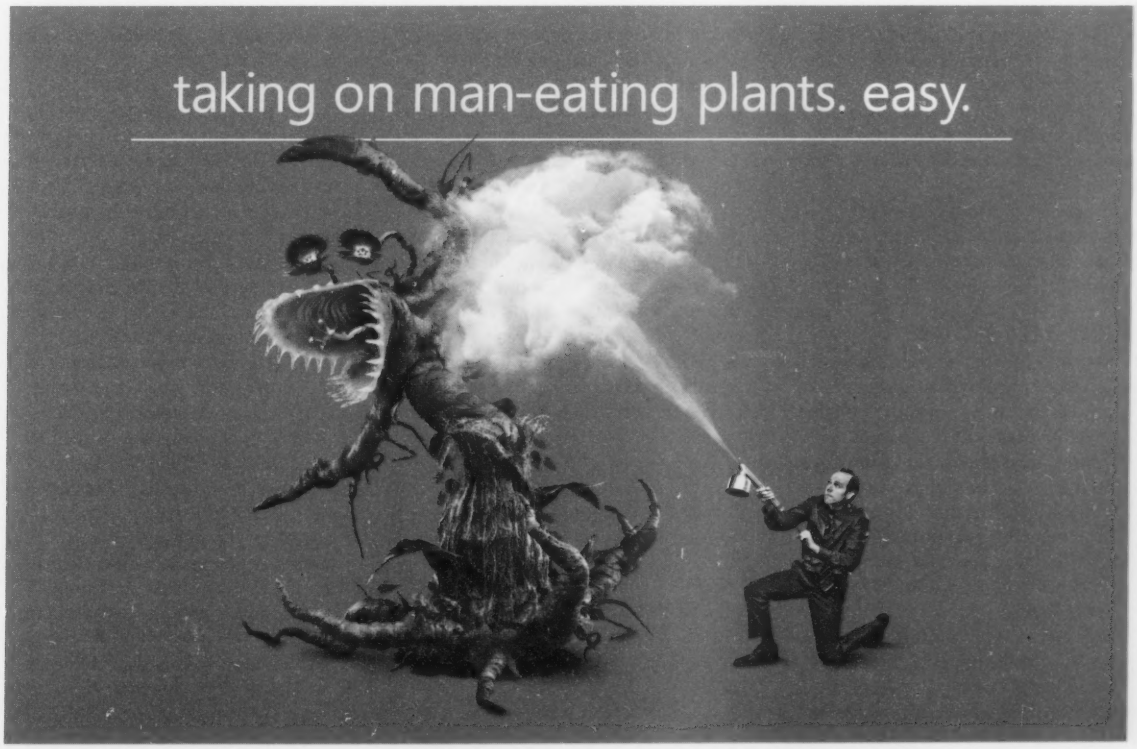
> "Yes, it is a stereotype, and yes, there are a higher-than-average number of Aspies in high tech."
> **BOB,** DATABASE APPLICATIONS PROGRAMMER WITH ASPERGER'S

What's better for that sense of control than a video game or a software program? Becker asks. "When you're designing a software program, there are rules and protocols to be followed," he explains. "In life, there is no manual."

Some of the Aspies he counsels are at the very top of their tech fields: software and aerospace engineers, computer scientists, Ph.D.s. But for every research fellow with Asperger's, Becker says, there is a legion of fellow Aspies who are having a much tougher time in the middle or low ranks of the industry.

"The spectrum of success is much broader than one would expect," agrees Roger Meyer, who runs one of the oldest peer-led adult Asperger's groups in the country and is author of *The Asperger Syndrome Employment Workbook*. "Adults who have grown sophisticated at masking and adaptive behaviors can either bubble along at the bottom of the market or do very well at the top."

It's that "bubbling along at the bottom" that has Becker, Meyer and other Aspie specialists concerned. Employees with Asperger's might do well for years in data entry or working in a job like insurance claims, where knowledge of ephemera is a prized work skill, only to flounder when they're promoted to a position that requires a higher degree of social interaction.



# Who You Callin' 'Typical'?

**"IF ALL 20 MILLION of us would gather in one place, would we be the 'different ones' then? Would we then be considered to have a 'syndrome' or 'condition'?"**

**So runs the opening salvo on Aspergia.com, a Web site created in 2002 by an Aspie. It imagines a world in which "neurotypicals," hobbled by short attention spans and an insatiable need for social interaction, are in the minority, and Asperger's Syndrome is the norm rather than a disorder.**

**Aspergia was an early trickle in the flood of pro-autism Web sites and blogs that seek to set on its head – via humor, logic or in-your-face militancy – the notion that anything other than neurotypical development is a disability that must be cured.**

**The latest salvo is the video "In My Language," by Amanda Baggs, which has been burning up YouTube and has been picked up by mainstream media outlets worldwide.**

**For just a hint of the offerings online, check out these sites:**

- **AspiesforFreedom.com**
- **Aspergia.com**
- **Autismcrisis.blogspot.com**
- **Thiswayoflife.com/blog**

**– TRACY MAYOR**

"The more technical the job, the better they do. But for some, managing people in a supervisory capacity can be a problem," Becker says.

That can leave Asperger's employees stuck in the lower ranks of IT, sometimes in jobs that are vulnerable to outsourcing, says Meyer. For example, certain tech-support situations, where sensory distractions are minimal and human interactions are reduced to a screen or a voice on the phone, are a natural fit for some Aspies.

"They're good at diagnostic work. They can get in and slosh around in the computer, use their encyclopedic knowledge of applications and workarounds, and arrive at a solution that may be unorthodox but effective," says Meyer.

But as those jobs increasingly become automated and/or outsourced, Aspies' chances for employment diminish.

## DARK LITTLE SECRET

Becker and Meyer say they have yet to hear of a single corporation that has any kind of formal program in place to nurture and support employees with Asperger's and HFA, aside from covering the costs of therapy through standard health care plans.

That begs the question: If Aspies are everywhere in IT, why isn't the industry doing more to acknowledge and support them?

High-tech companies have been at the forefront of supporting workers with nearly every type of social, ethnic, physical or developmental identification. Microsoft Corp., for example, sponsors at least 20 affinity groups — for African-Americans, dads, the visually impaired, Singaporeans, single parents, and gay, lesbian, bisexual and transgendered employees, to name a few. But there's nothing for autistics.

A Microsoft spokeswoman confirmed that the company has no group or formal, separate support network for Asperger's. On rare occasions, an employee with AS has requested accommodation, she says. When that happens, the employee is paired with a disability case manager to determine "reasonable accommodation."

Intel Corp. and Yahoo Inc. didn't respond to requests to discuss their policies toward Asperger's employees, and a Google Inc. spokesman said that the company was "unable to accommodate the inquiry."

To be fair, the question of whether and how corporations should support Aspies is a thorny one. For one thing, autism is something others can't see or easily understand. "A readily visible disability is easier [for co-workers] to cognitively take on board, it seems," Ryno laments. "Ah, if only Asperger's made one turn green!"

> "I get the feeling they'd like to put me in a black box, give me an assignment and get it out the other end in a few weeks."
>
> **JEREMY**

"If you meet someone from another country," Jeremy notes, "people know they're from a different country, and they cut them some slack."

Moreover, by their very nature, Aspies are not likely to initiate a club or support group, which is how such things often start in corporations. In fact, many Aspies aren't "out" in the workplace; they haven't acknowledged their condition publicly.

Whether they should is a matter of contention. Ryno revealed his Asperger's at only one job (his last) and lived to regret it, even though his boss happened to be an Aspie as well.

"It's the first time I've had an AS person as a superior," he says. "It was definitely a refreshing change not to have to explain why I didn't do eye contact, hated meetings and could not suffer fools, let alone feign gladness."

In retrospect, however, Ryno regrets having told anyone. "I'd say there were many disadvantages and few gains. The gains were short-lived, too."

Jeremy has found that when he asks co-workers and bosses to accommodate his differences, it doesn't help and in fact always seems to lead to the same end: termination.

"I don't blink. I stare. I don't understand boundary issues very well. I don't have a feeling of group membership, but other people have a very firm idea of membership in groups," he says, struggling to define the problem as precisely as possible.

As a result, whereas other employees are able to correct their mistakes and adjust their behaviors day to day in the office environment, Jeremy isn't.

"People won't give me negative feedback. I don't know what I'm missing until it's already become a problem," he says. "I pick up on a lot of stuff, but I miss some cues. They're like little black holes, and the little black holes accumulate, and I end up being forced out. It keeps happening."

It isn't a question of work. He is sought out for his programming specialty and is always busy as a contractor. It's about social relationships. "I get the feeling what they'd like to do is put me in a black box, give me an assignment and get it out the other end in a few weeks," he says.

The subtle social situations that Jeremy and other HFA and Aspie employees struggle with may be beyond the ken of even the most astute human resources organizations. But that doesn't mean the industry's heavy hitters can't fashion a more Asperger's-friendly workplace, a kind of "if you build it, they will come — and work" scenario.

These changes needn't be monumental, or limited to Aspies. For example, the work/life accommodations in place at Internet companies like Google scored high among Aspies we spoke with. "I do wish every employer were as accommodating as Google, supplying prepared meals and encouraging people to bring their dogs to work," Bob says.

Physical changes to the office environment can help as well, Grandin and others point out. Many Asperger's workers are debilitated by flickering or blinking lights; the mechanical noise of an air conditioner, photocopier or ringing telephones; or simple employee chatter. A quiet corner, a private office, a cubicle with soundproofing or a white-noise machine might be all it takes to turn a bad situation around.

> "I can make your systems efficient and lower your downtime. I cannot make your users happy.
>
> **RYNO,** FORMER SYSADMIN WITH ASPERGER'S

And some spoke highly of the rumors that Microsoft offers a "buddy system" for Aspies, pairing an Asperger's employee with a nonautistic colleague who coaches him through the whys and wherefores of social interactions. A Microsoft spokeswoman says there is no official information available on any buddy programs but adds that there is a good chance such initiatives are conducted on a team-by-team basis within the company.

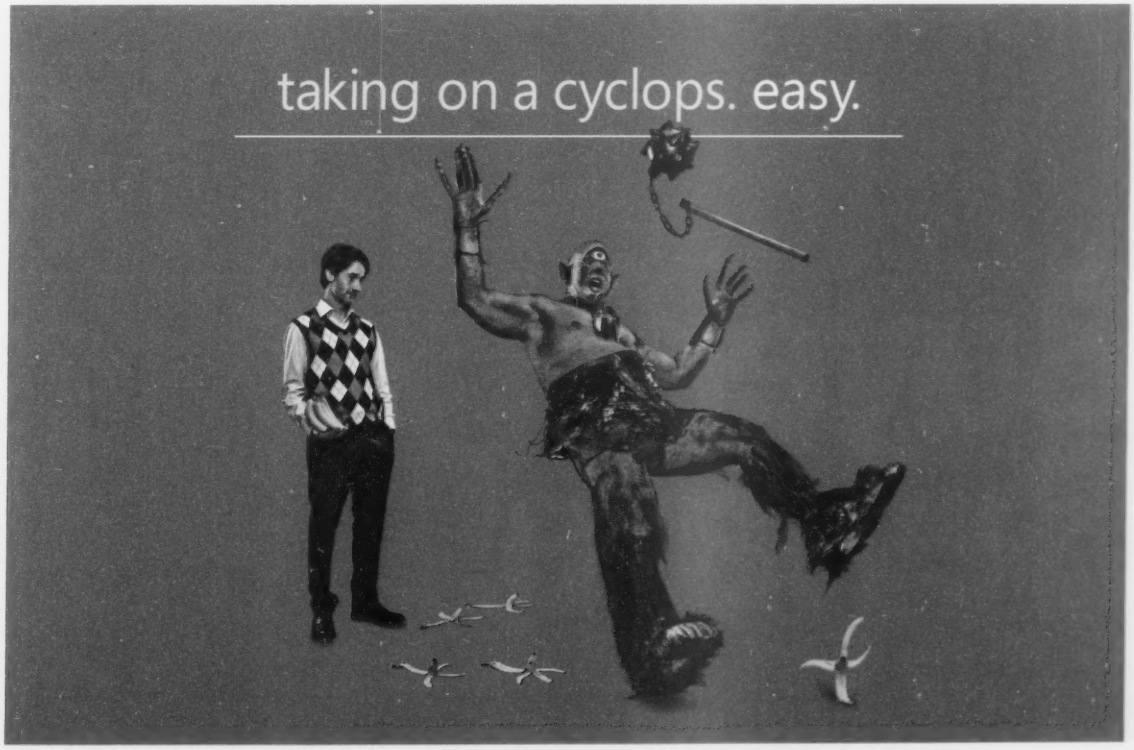
Beyond that, Asperger's individuals simply hope that they'll be given a chance to find a safe niche in the corporate landscape. Companies have evolved to accommodate all kinds of differences, Ryno points out. In the same way, he says, "employers of Aspies should look at the person and the tasks, environment and communication structure and adjust for the best viable fit."

Becker has seen some early signs that forward-looking technology companies may be doing just that.

"I have seen cases where [a client] will say, 'I have Asperger's' and receive a positive response from social workers employed by the business or the insurance companies," he reports.

But Becker is willing to cut IT some slack — for now. "Most corporations have never dealt with Asperger's. It's a fairly new diagnosis — even newer for adults," he points out. He thinks that IT wants to support Aspies as valuable employees; it just doesn't yet know how.

But that, too, will change, Becker predicts: "In the next five to 10 years, we'll see more businesses treating autism spectrum disorders as routine." ■



# Buyer Beware!

## THESE SIX INFURIATING TECH SALES REPS WILL DRIVE YOU TO DISTRACTION.

WHEN Craig Urizzola's company decided to make a seven-figure investment in a new ERP system, he contacted his local reseller to order hardware to run it on. "We told them exactly what we wanted and said, 'We don't need SANs or clustering or any of that,' " says Urizzola, CIO at Saladino's, a food service distributor in Fresno, Calif. "But their proposal came back with SANs and 10 more servers than we asked for. They just don't listen." ›››

That IT salespeople just don't listen is a familiar refrain from technology buyers. But despite your complaints, you know that you can't quite live without them. You need them to execute transactions and help guide you, to offer advice and recommendations, and to give you a heads up about forthcoming products that may solve real business problems.

Unfortunately, although technology has made quantum leaps over the years, salespeople haven't changed much. And today, as ever, too few of them act as honest advisers and problem-solvers. Too many are dime-a-dozen drones who stick to marketing scripts and are more concerned with selling what they want to sell than they are with selling what you need to buy.

We spoke with seasoned IT executives to uncover the sales archetypes that drive them crazy. So bar the door, unplug the phone, and read on.

## THE YES MAN

This person oversells his product, promising you the moon and delivering nothing but trouble. When pressed on whether the product can solve your problem, he says, "Sure! It will do that and unify all your systems and make everything run nice and smooth. And by the way, it also cures male-pattern baldness." (We're kidding about that last one. Sort of.)

The sales rep simply might not know whether the product meets your needs, but he's afraid to admit it, so he takes the easy way out, which is to nod and say yes to whatever you ask.

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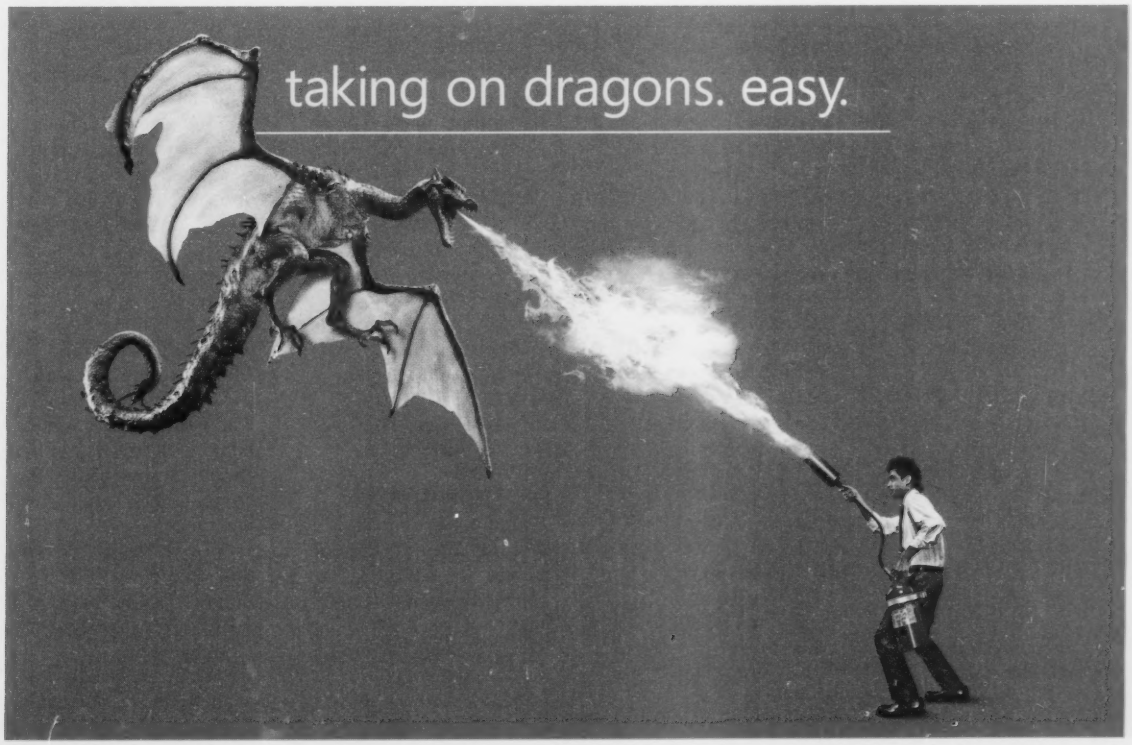
"A lot of salespeople pretend to know our business, but they end up giving us something we don't need," says Joshua Koppel, assistant director of IT at the Chicago Department of Revenue. He adds that salespeople frequently gloss over or altogether miss compatibility and integration issues. "We end up tweaking and tweaking, and that costs money," says Koppel.

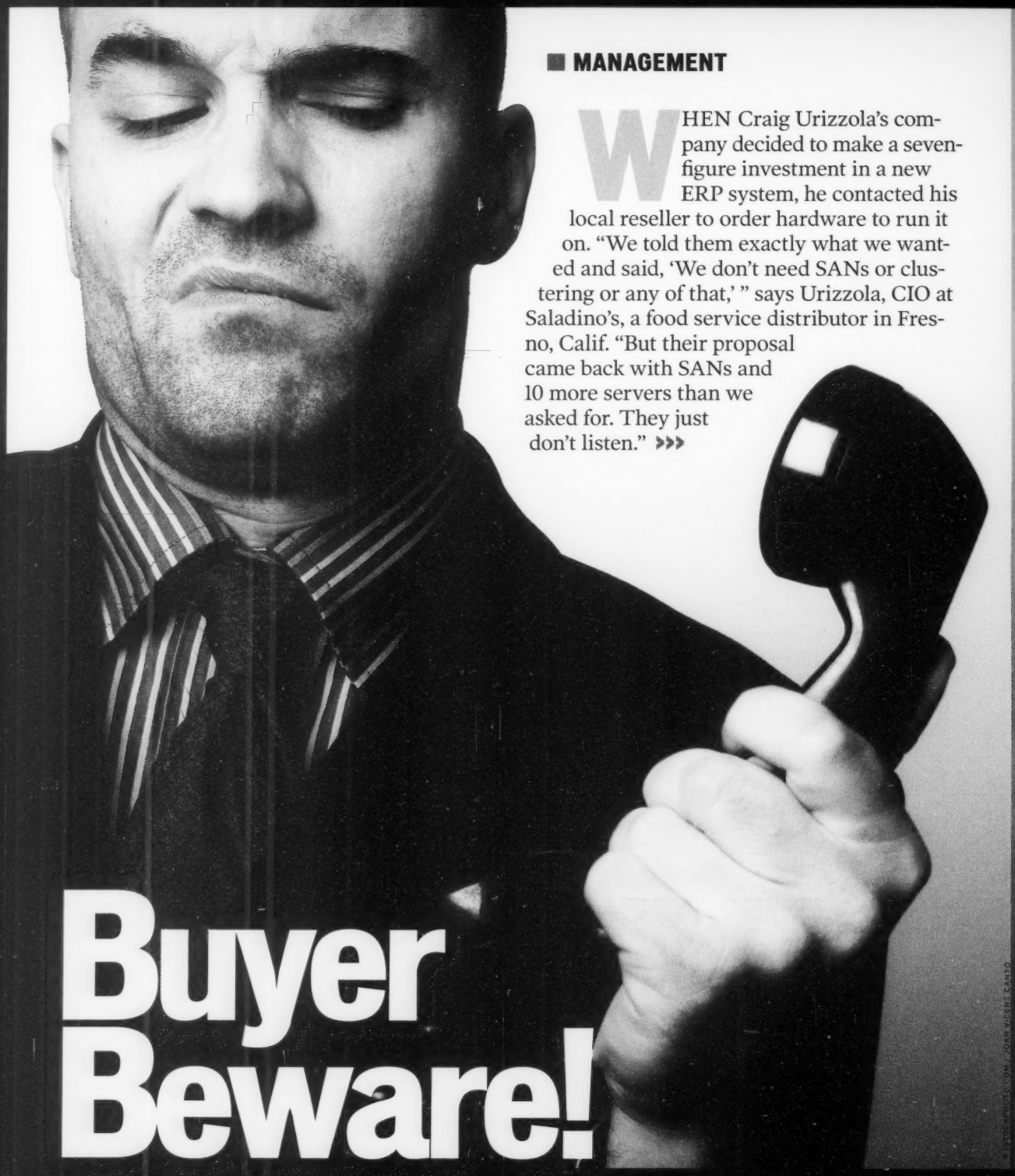
Sometimes the yes man is just trying to hit his monthly quota. In that case, he's often hard to find after he makes the sale.

## THE ARMAGEDDON EVANGELIST

"Some [salespeople] present the doomsday approach, like you need to buy their service or product or something bad will happen," says Katie Goodbaudy, technical support specialist at Airgas Nor Pac, a subsidiary of Airgas Inc. in Vancouver, Wash.

In IT, that's called spreading FUD (fear, uncertainty and doubt), and it often involves making allusions to a competitor's products or some nebulous security vulnerability. Goodbaudy says she does her own due diligence to make sure her company is protected from





■ MANAGEMENT

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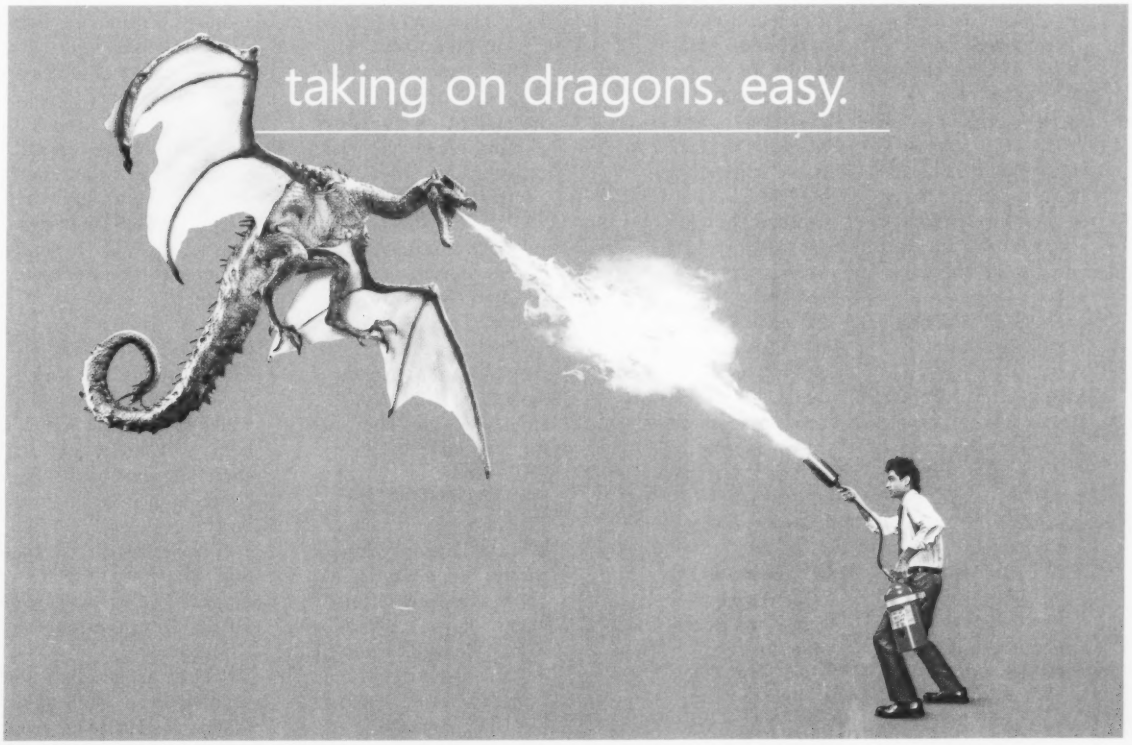

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Urizzola thinks highly of vendors who turn overselling on its head and help customers realize they may not need as much firepower as they're asking for. An example: His company requested an ERP module that his software provider insisted he didn't need. "They eventually proved to me that I didn't need it," he says, noting that his respect for the vendor grew because of the incident.

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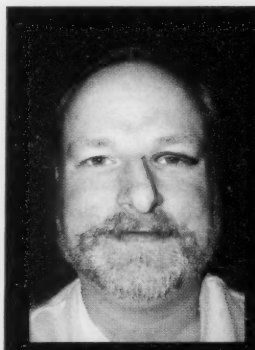

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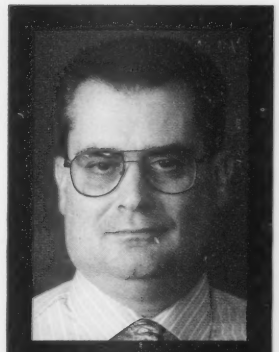

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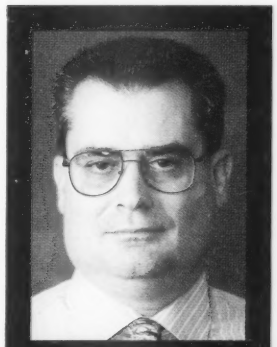

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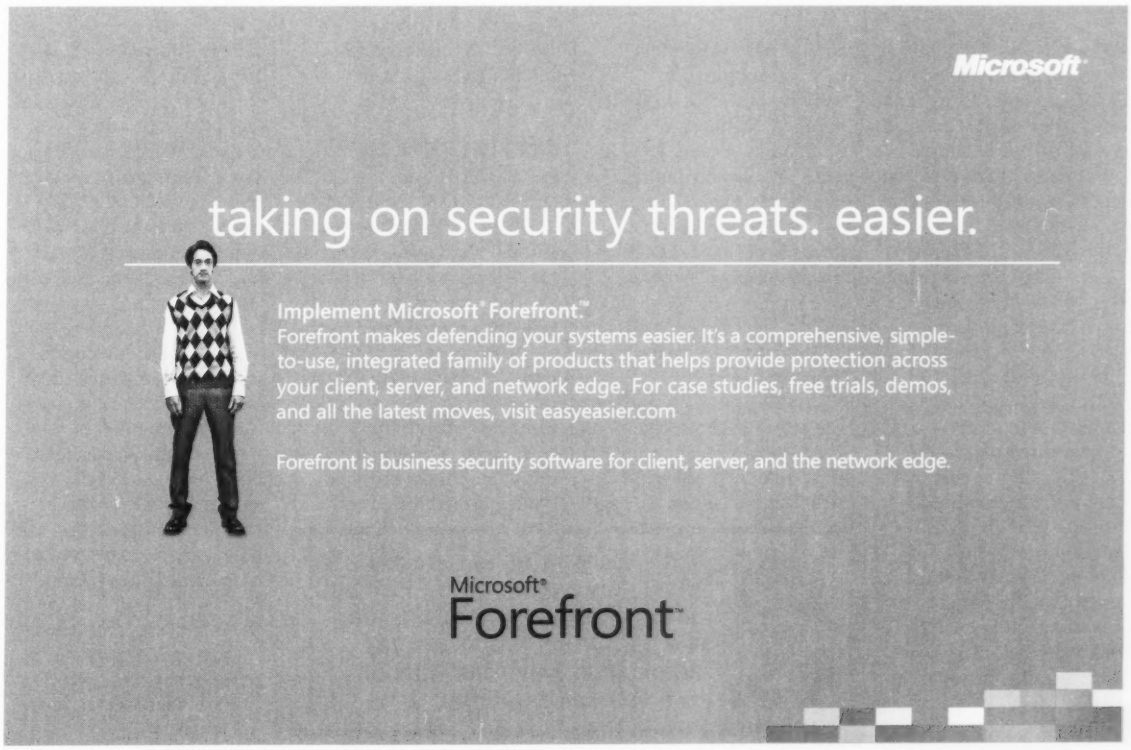
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# Beyond Film

By replacing film-based images with an online system, FirstHealth reduced costs and improved patient care. **By Thomas Hoffman**

PREMIER 100 IT LEADERS 2008 **BEST IN CLASS**

This story is part of an ongoing series showcasing the best projects of this year's Premier 100 IT Leaders.

## FirstHealth of The Carolinas

This private, not-for-profit health care network serves 15 counties in the Carolinas. Based in Pinehurst, N.C., it operates three hospitals with 611 beds, has 3,954 employees and dispensed $194 million in payroll and benefits in 2006.

**IT CHAMPION:** David Dillehunt, CIO

**IT STAFF:** 65

**PROJECT PAYBACK:** A $2.5 million investment in hardware and software – including a picture archiving and communications system from McKesson and a fabric-attached storage system from NetApp – has reduced the company's total storage costs by at least 30%; improvements to care have reduced patients' length of stay.

FIRSTHEALTH OF THE Carolinas Inc. began replacing its film-based radiological technology with an online digital capture and storage/retrieval system in late 2005 to enable up to 300 of its radiologists and physicians to instantly access clinical images from any location, says Linda Briggs, director of application support.

But project leaders such as CIO David Dillehunt envisioned much more.

"We wanted to take a broad approach to this — not just for our three hospitals, but also as a community repository of radiological and other images" for health care organizations outside of the FirstHealth network, says Dillehunt. This includes Pinehurst (N.C.) Medical Clinic Inc., a 55-physician facility that's separately owned and operated.

But before the so-called picture archiving and communication system (PACS) project could accomplish these goals, FirstHealth faced a high technological hurdle in trying to synchronize the clinical systems used by its three hospitals and other clinics for patient identification purposes, says Dillehunt.

FirstHealth's IT organization attacked those challenges by applying a combination of technologies, including McKesson Corp.'s Horizon Passport system. The Web-based enterprise master patient index is used to help coordinate medical records across the organization, Dillehunt says.

In addition, FirstHealth technical analysts built software interfaces and workflow processes into the clinical applications used at its hospitals and associated clinics. Although that multilateral approach worked well, Dillehunt says continuing efforts to keep patient ID data harmonized "requires constant monitoring."

"It speaks to the challenges of building RHIOs," says Dillehunt. Regional Health Information Organizations are aimed at integrating clinical and patient record systems among hospitals and clinics within a geographic area.

### PACS PAYS OFF

PACS, which went live in March 2006, is providing FirstHealth with several clinical and IT-related benefits. For starters, FirstHealth has been wrestling with year-over-year data growth of 100% since 2004. With a mix of more than 650 applications to manage, the organization saw a digital storage architecture as a means to increase its operational efficiencies, reduce costs and improve patient care.

The digital imaging system has also enabled FirstHealth to slash its annual film budget from around $800,000 to about $50,000 this year, says Mike McCarty, FirstHealth's director of imaging.

The PACS system relies heavily on storage and networking software from Net-App Inc. NetApp NearStore systems enable high-speed, disk-to-disk backup while serving as a permanent archive for the PACS images. NetApp SnapMirror software works with NetApp Snapshot technology to replicate all critical business and patient data among FirstHealth's three hospitals. Meanwhile, NetApp FlexVol storage virtualization software dynamically provisions and reallocates the organization's storage resources as needed.

Real-time access to patient information has helped improve the quality of patient care by enabling FirstHealth physicians to make faster decisions about treatment, says Drusi Smith, a senior clinical analyst at the organization. That in turn is helping FirstHealth reduce the length of patient stays in its hospitals, Smith says.

FirstHealth is also providing storage access and other services to Pinehurst Medical and other clinics. As part of those services, FirstHealth stores clinical data for the health care organizations that they can access online, says Smith.

But as a not-for-profit, FirstHealth isn't in it for the money, says Dillehunt. "We're basically just covering our costs," he says. "This is more of a quality initiative." ■

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**DAVID DILLEHUNT,** CIO, FIRSTHEALTH

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# Framing an Acquisition

## Networks need to be integrated **on Day One.** But how much **integration** is really necessary?

MERGERS and acquisitions can be tricky from a security standpoint. In a way, that's because they tend to be rare, and so they present us with situations we don't encounter week to week in our work as security managers.

Then there's my job.

Acquisitions are fairly common at my company. In our industry, it's often easier to acquire a company that has a product we're interested in than it is to develop something ourselves. Sometimes we want to capture a customer base or increase our competitiveness in a market.

One thing all these acquisitions have in common is that I find out about them the same time as the rest of the world, during the public announcement. There was one the other day. This time, we're acquiring a company whose headquarters and data center are in Europe. It also has major operations in China and Hong Kong.

I've been told that the employees of the acquired company need to be connected to our network on Day One — the day both companies sign all binding agreements. But it's the joining of networks, of course, that's perilous.

Full integration of our networks would require careful study of the target company's environment. Unfortunately, the target has been reluctant to provide information, and it won't let anyone from our IT department do an on-site assessment. This is somewhat understandable, since we haven't inked the deal yet. But if we're going to provide access on Day One, something's got to give.

I always start off with a security questionnaire. The responses help focus my efforts during the security assessment, but they aren't a replacement for a thorough review. In fact, the one time I let a network integration go ahead based entirely on the answers to a questionnaire, we ended up with a major virus and worm outbreak that affected several thousand desktops and dozens of servers. I'll never do that again.

**■ With no real sense of the target's security posture, I can't approve Day One integration.**

The questionnaire primarily focuses on things like patch management, antivirus efforts, firewalls, remote access, third-party relationships, security policies, wireless practices, history of security incidents and intellectual property protection. There are more than 50 questions — enough to give me a feel for how serious a company is when it comes to security.

### NO GO

This target's responses, though, didn't give me any real sense of its security posture. So I can't approve Day One integration.

Now the question becomes, just what kind of connectivity are we talking about? Will the new employees need access to engineering labs and source-code repositories? Or are we talking about e-mail and human resources materials? As it turns out, what is actually needed on Day One is access to e-mail accounts and our intranet page with benefits information.

That limited integration gave me an option that should help us maintain our network's integrity. I will provide the 400 new employees with SecurID tokens and then let them access our infrastructure through a Citrix WinFrame. That way, they will be able to execute applications within a frame rather than on the local computer.

The frame is really just a Windows desktop environment. We can create policies that restrict access to certain applications and network resources. This approach will make it very difficult for viruses that might be lurking in the acquired network to infect our network.

Of course, once the deal is signed, I should be free to conduct a real audit and complete all necessary remediation. After that, the Citrix tool can go away, and our new users will enjoy the same access as everyone else in the company. ■

*This week's journal is written by a real security manager,* **"Mathias Thurman,"** *whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.*

### Trouble Ticket

**ISSUE:** A target company's security posture can't be fully assessed.

**ACTION PLAN:** Use stopgap measures until a real review can be done post-acquisition.

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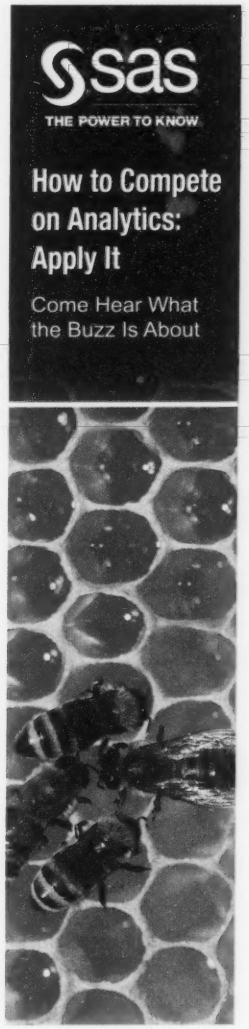


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■ OPINION

Paul Glen

# Facts and Meaning

I OFTEN HEAR complaints about how unmotivated technical groups can be, but managers sometimes seem to miss some of the most important opportunities to create an environment in which motivation can grow.

As best I can tell, this is deeply rooted in our backgrounds as engineers. Most IT managers start out as technicians, so we are steeped in the world of facts. We search for them. We love them. We live and die by them. They are our bedrock. But we are so enamored of the facts of our work that we sometimes forget to explicitly speak of its meaning. We assume either that the facts of our work *are* the meaning or that the connection is so self-evident that we never need discuss it.

But the meaning of the work can be one of the most important sources of motivation for a group.

For example, a few years ago, I attended a meeting and listened to a presentation from the CIO of UNICEF, the United Nations Children's Fund. He was talking about the work his staff was doing, setting up satellite-network nodes in countries around the world. His description of the facts of the group's work seemed rather grim. I imagined what it might be like to be part of his team.

The work seemed pretty repetitive: setting up the same network equipment over and over again. The pay was probably poor, since it was through the U.N. The travel sounded relentless: People were likely on the road for weeks or months at a time, and they weren't traveling to the garden spots of the world. In fact, many of these installations were being done in war zones, so the work might occasionally entail being shot at.

The facts of this job seemed remarkably unappealing: poor pay, boring work, isolation from family, and dangerous conditions. Why would anyone want to do it? Perhaps for every network node installed, 100,000 children have a chance to eat. If that's the answer, it's worth it.

**■ The meaning of the work can be one of the most important sources of motivation for a group.**

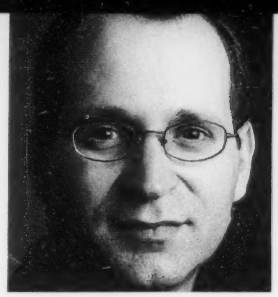
In this case, the facts and the meaning of the work are completely different things. The facts seem like excellent de-motivators, while the meaning is extraordinarily compelling.

Of course, not every project offers such rich opportunity to explore meaning. If the goal of your project is to reduce inventory costs by one-eighth of a percentage point, don't expect people to weep in ecstasy during the rollout. Sometimes you have to look for motivation elsewhere.

So, how do you know if you're thinking about the facts or the meaning of your work? Here's one way to look at it:

Facts are simple points. They're cold and lifeless. They just lie on the page and express some simple truth.

Meaning requires a more narrative structure.



There are characters — people who inhabit the narrative. There's action — things that happen to the characters, or could happen. There are settings — spaces where the action happens. And there's transformation, internal and external. The heroes struggle, and the villains suffer.

In the narrative form, facts come alive and are woven into the story line. They support the larger structure and are thereby imbued with meaning. Here, a project is no longer just a series of tasks lying dead on a Gantt chart. It's a heroic story with a theme and lessons.

So next time you wonder why your group seems unmotivated, ask whether people have a sense of more than just the facts of their work. Ask what they think it means, and you may find that everyone has a different idea. But just having them think and talk about the meaning can be a step toward deeper motivation and engagement. ■

**Paul Glen** *is the founder of the* GeekLeaders.com *Web community and author of the award-winning book* Leading Geeks: How to Manage and Lead People Who Deliver Technology *(Jossey-Bass, 2003). Contact him at info@paulglen.com.*

# Congratulations Finalists

The Society for Information Management, *Computerworld* and *InfoWorld* proudly present the finalists in the "Best Practices in Innovation" awards program, which honors a single "best practice" case study selected from the following field of qualified finalists. The honoree will be announced, and all finalists will be recognized, in a special ceremony in New York City on May 7, 2008.

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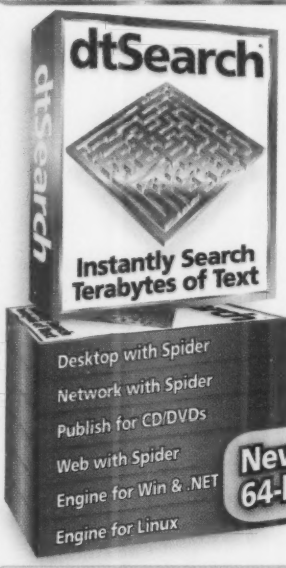


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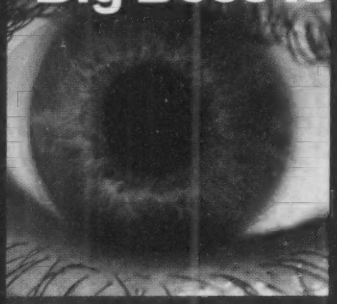
# Career Watch

## Big Boss Is Watching



**Twenty-eight percent** of employers have fired workers for misusing e-mail, and 30% have fired people for misusing the Internet, according to the 2007 Electronic Monitoring & Surveillance Survey, a study of 304 U.S. firms by the American Management Association and The ePolicy Institute. Those who participated in the poll, conducted in November and December, cited the following reasons for the firings:

| E-MAIL MISUSE | |
|---|---|
| Violation of company policy | 64% |
| Inappropriate or offensive language | 62% |
| Excessive personal use | 26% |
| Breach of confidentiality rules | 22% |
| Other | 12% |

| INTERNET MISUSE | |
|---|---|
| Viewing, downloading or uploading inappropriate/offensive content | 84% |
| Violation of company policy | 48% |
| Excessive personal use | 34% |
| Other | 9% |

The survey also found that 66% of respondent companies monitor Internet connections, and 65% use software to block connections to inappropriate Web sites – a 27% increase since 2001. Only two states, Delaware and Connecticut, require employers to notify workers of monitoring, but 83% of companies that monitor employees said they inform them about it in some way.

PAGE COMPILED BY JAMIE ECKLE.

## TAKE A BREAK!

**Executives are feeling overburdened. Is your personal workload too heavy?**

27% No

Yes

SOURCE: SURVEY OF 230 SENIOR EXECUTIVES AND MANAGERS BY NFI RESEARCH, MADBURY, N.H., APRIL 2008

■ Q&A

## Timothy Golden

The **Rensselaer Polytechnic Institute** professor talks about the unhappy side of telecommuting.

**Telecommuting is painted as a boon for workers. Is it?**
Research suggests teleworkers experience a number of positive outcomes. But recently, a study of mine was published in the journal *Human Relations* that investigates telework's impact on co-workers. Essentially, the study found that as the proportion of teleworkers in a work unit increased, non-teleworkers were less satisfied with these co-workers.

**What sorts of complaints did you hear from the workers who stayed in the office?**
Non-teleworkers seemed to feel as if the teleworkers were less an integral part of the work unit, and they did not feel as close to them.

There may be several reasons for this. First, non-teleworkers may experience decreased flexibility to conduct their work activities, due to greater restrictions in terms of coordinating their own tasks and schedules. For instance, there are some sensitive or complex things that are simply best discussed face to face, and these types of discussions may not be as easily accomplished if one of the employees is not in the office full time.

Second, non-teleworkers may experience changes in the scope or amount of workload due to the absence of the teleworker from the office. For instance, non-teleworkers may feel pressured to respond to requests immediately if a manager stops by their office or cubicle, whereas these same requests might have otherwise been handled by the teleworker if they were in the office. Sometimes, due to either the immediacy of the request or the fact that someone of importance is standing in front of them asking, the non-teleworkers may experience additional workload.

**What can companies do to alleviate the dissatisfaction?**
Managers need to ensure that teleworkers spend greater time interacting face to face with their non-teleworking co-workers. This might be accomplished by scheduling meetings when the teleworkers are in the office and ensuring that informal interactions occur as well.

Managers should also be sure to grant high levels of job autonomy to non-teleworkers so that they are not constrained as much by the absence from the office of their teleworking co-workers. Perhaps managers might structure work activities so as to reduce the level of dependence non-teleworkers have with teleworkers, to ensure that they can operate freely and without feeling as if teleworkers are making their jobs less easy to accomplish.

Generally, it may be that managers need to somehow re-create those informal conversations that often occur by the elevators or water cooler, so that all members of the work group feel connected to each other and maintain affinity and respect.

– JAMIE ECKLE

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# Shark Tank

## TRUE TALES OF IT LIFE AS TOLD TO SHARKY

### But It's Getting Faster

Request comes to pilot fish to provide employee data for the companywide address book. No big deal. Time to code: 60 minutes. Affected employees: 8,000. "Flash forward two years," says fish. "Senior executives get new cell-phone toys that can use the companywide address book. But the phone numbers are formatted for humans to use, not new cell-phone toys." New request: Change address book format so cell phones can dial the phone numbers automatically. Time to code: 10 minutes to comment out old code and add new code. Affected employees: 8,000. Employees who actually need this data: 10. Jump ahead eight more months. Senior executives decide new cell-phone toys aren't fun anymore. Yet another request: Change format of phone numbers so they're easier for humans to use. Actual time to code: one minute to comment out new code and uncomment old code. Reported time to code: one hour. "Flash forward six months," fish says. "Senior executives get new cell-phone toys that can use the companywide address book. But the telephone numbers are formatted for humans to use, not new cell-phone toys. . . ."

### About Time

This vendor is great at following through on support problems, with just one catch. "Their global support is based in Eastern Europe, and this has caused complications," says a customer pilot fish. "Recently I received a follow-up e-mail asking about the status of a case. It was sent at 4:53 a.m., and I had my smart phone by my bed, since I was on call." Later that day, fish responds, thanking support for the follow-up but pointing out that many other customers who are also on call can't turn off e-mail at night. Could you please check the time zone the customer is in before sending e-mail? Next day, director of global support responds, apologizing and promising not to send follow-ups during night hours. Fish's own prompt reply: "It is 3:45 a.m."

### Listen Harder

Customer at a lumberyard calls vendor support pilot fish saying his server is making a whirring noise, and fish quickly decides that the server's fans are starting to go. We'll send out a tech, fish says, but meanwhile you might try cleaning the fans with a can of compressed air. Next day, customer calls back, demanding $10,000 to replace the server. Seems he heard "clean," took the server home and gave it a bath – complete with soap. "Needless to say, when he plugged it in, there was a big spark and no more server," fish says. "Thank goodness for quality-control recordings of support calls."

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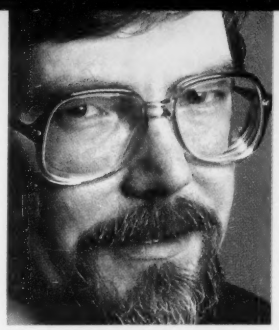
■ FRANKLY SPEAKING

Frank Hayes

# All About Money



WHAT IF you threw a technology party and nobody came? Wal-Mart is in that position with RFID. In 2003, the retail giant said it wanted its 100 largest suppliers to put an RFID tag on every pallet of merchandise delivered after January 2005 — and the rest of its suppliers to join the party soon after. But as *Computerworld*'s Sharon Gaudin reported last week, it hasn't worked out that way.

Five years in, Wal-Mart says many of its top suppliers are tagging their pallets. Some, like Procter & Gamble, met the 2005 deadline. But about 70 of the top 100 didn't. Today, some smaller suppliers are on board as well, including Daisy, a family-owned sour cream maker that started RFID tagging in 2006.

But most of Wal-Mart's 60,000 suppliers aren't using RFID. They complain about costs and technology immaturity and costs and lack of examples and — oh yeah — costs. But, bottom line, they're not doing it.

By any reasonable measure, that marks Wal-Mart's RFID mandate as a failure. After half a decade, the party seems to be over.

You're probably not Wal-Mart. But on a smaller scale, you have the same problem. You have to find ways to get suppliers on board when you're trying to implement a new technology that extends beyond your business.

Maybe it's RFID, or old-style EDI, or a supply chain system. Whatever it is, there's one thing you've got to remember:

It's all about money.

It's not about technology. It's not about business processes. It's not about the size of the supplier or customer. It's not about coercion or cooperation.

In the end, it's about the cost of doing business. Cost is what your new system is intended to reduce for your company. And cost is what will make partners balk at signing on.

**■ Wal-Mart isn't calling it a penalty – just a $2 charge for putting a 10-cent RFID tag on the pallet.**

That's important to remember, because we in IT tend to see the world in terms of technology and process and scale and integration. To us, money isn't the hard part. But for suppliers being strong-armed into an IT project, money may be the biggest part of the deal.

And that can be an advantage.

Case in point: Wal-Mart's answer to suppliers that still haven't implemented RFID is a money solution. Wal-Mart subsidiary Sam's Club will soon start charging suppliers $2 or more for each pallet that doesn't have an RFID tag.

It's a clever solution: Wal-Mart isn't calling it a penalty, just a charge for putting the 10-cent RFID tag on the pallet. And that makes the supplier's business decision one about the cost of implementing RFID vs. the cost of not implementing it.

Even Wal-Mart can't force suppliers to join its RFID party. But the company can turn a decision about technology into one that's about dollars.

You can't force partners to buy into your technology plans, either. And your CEO won't dump a supplier just because it doesn't conform to IT's plans.

So assume that some suppliers won't buy in. Be sure you build a way around that problem into your technology plan. And make certain you include from the start what Wal-Mart only added years after its original RFID mandate: a clear dollar cost to suppliers that reject your new technology.

That way, you don't need to count on buy-in. And you won't have to eat the cost of that half-empty party yourself.

Sure, you'll still have to sell that idea to your CEO. But even the most tech-clueless CEO understands money. And that somebody has to pay for the party — one way or another. ■

**Frank Hayes** *is* Computerworld's *senior news columnist. Contact him at frank_hayes@computerworld.com.*

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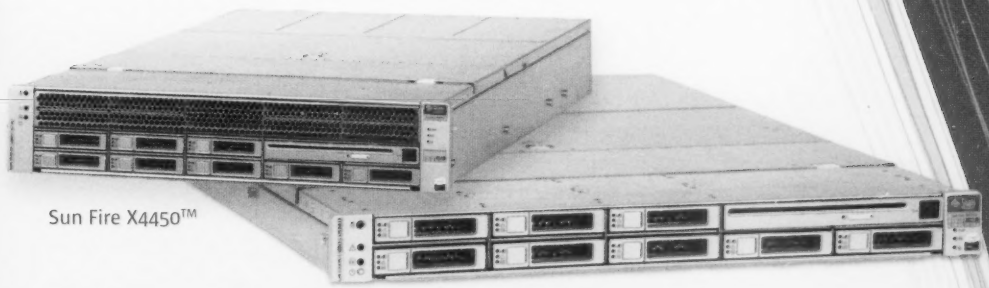

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